

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA  
FOR THE COUNTY OF LOS ANGELES

BETTY BULLOCK,  
  
Plaintiff,  
  
vs.  
  
PHILIP MORRIS INCORPORATED, a  
corporation; DUPAR'S RESTAURANT, a  
corporation; ROBINSON'S MAY, a  
corporation; HILTON HOTELS  
CORPORATION; STEVEN'S STEAK AND  
SEAFOOD HOUSE, a corporation; and  
DOES 4-100, inclusive,  
  
Defendants.

DEPOSITION OF RICHARD CARCHMAN, Ph.D., taken on behalf of the Plaintiff, at 11755 Wilshire Boulevard, Suite 1170, Los Angeles, California, at 9:45 a.m., Wednesday, May 15, 2002, before RANDY D. GARRETT, CSR No. 8931.

Reported by: RANDY D. GARRETT, CSR No. 8931  
Job No.: 02-0515RG

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## APPEARANCES

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EXAMINATION

BY MR. PIUZE: Page 5

EXHIBITS

(NONE)

QUESTIONS NOT ANSWERED:

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LOS ANGELES, CALIFORNIA; WEDNESDAY, MAY 15, 2002  
9:45 A.M.

RICHARD CARCHMAN, Ph.D.,  
called as a witness on behalf of Plaintiff, having  
been first duly sworn, was examined and testified as  
follows:

EXAMINATION

BY MR. PIUZE:

Q Tell me your name.

A Richard Alan Carchman.

Q I don't need your home address, but where are  
you living nowadays?

A [DELETED].

Q How often do you get out to the West Coast?

A Once every three months.

Q Why?

A Meetings, our family or friends, and sometimes  
for things like this.

Q Meaning litigation?

A Yes.

Q Do the meetings have to do with litigation?

A No.

Q Are you retired from Philip Morris?

5

A Yes.

Q When?

A February 1st, 1999.

4 Q What year did you start with Philip Morris?  
5 A 1988, the very last day.  
6 Q Are you a consultant to Philip Morris?  
7 A Yes.  
8 Q What are the terms of your consultancy?  
9 A I consult in two areas, one related to legal  
10 issues, litigation. That's about 30 percent of my time.  
11 And the rest relates to consulting for research,  
12 development and engineering, primarily with the harm  
13 reduction program.  
14 Q When you put all of the consulting together,  
15 does it add up to like twenty hours a week or ten hours  
16 a week or what?  
17 A It's about 150 days a year.  
18 Q So you're working half time roughly?  
19 A Roughly.  
20 Q Woodby says he spends his time fishing.  
21 A I wish. I wish. I did a little fishing the  
22 other day, but I throw everything back. He eats pretty  
23 much everything he catches.  
24 Q That's because his fish are bigger than yours.  
25 A Absolutely.

6

1 Q Where do you fish?  
2 A My backyard.  
3 Q In [DELETED]?  
4 A Yeah.  
5 Q You've never worked on a tobacco field I take  
6 it?  
7 A No. Actually, on the way here I was telling  
8 these fellows that where I live, they stopped growing  
9 tobacco about fifteen years ago. So I had neighbors  
10 that grew tobacco. And when I first moved out there in  
11 '74, they had a lot of fun giving me homespun to chew  
12 and seeing how much I enjoyed it.  
13 There are still tobacco barns all around where  
14 I live.  
15 Q As part of your indoctrination or training at  
16 Philip Morris, were you ever sent out to the fields to  
17 watch how the tobacco was grown?  
18 A Yes.  
19 Q Do you think you know, you've got a pretty good  
20 idea how it's grown?  
21 A Well, I've been out to the fields. I've  
22 watched them grow it and I've watched my neighbors grow  
23 it and I've spoken to them about it. I would say I'm  
24 familiar with it but nothing more.  
25 Q What kind of tobacco grows in your area?

7

1 A None now. About fifteen years ago they stopped  
2 growing tobacco in the county I live in because they  
3 were all -- it's very labor intensive and these were  
4 very small farms.  
5 Q So sixteen years ago what kind of tobacco did  
6 you have?  
7 A Sun-dried.  
8 Q Have you ever seen a tobacco worm?  
9 A Tobacco worm, well, not a beetle but a worm?  
10 Q Worm.  
11 A Yes.  
12 Q Is that the right terminology, tobacco worm?  
13 A There is a -- there are tobacco worms, horn  
14 worms. These days they like eating tomatoes, which

15 really, they're in the same family as tobacco. They're  
16 a solenacia, they're in the solenacia family. But  
17 they're big worms, usually green, and they have what  
18 look like horns on them.

19 Q They're voracious, aren't they?

20 A Absolutely.

21 Q Unless measures are taken to kill them, they'll  
22 eat all the tobacco?

23 A Oh, I don't know. I think they'll do  
24 significant damage, but I'm not an expert on tobacco  
25 worms or horn worms. But I think if you're growing

8

1 tobacco for profit, you don't want animals or critters  
2 to eat it or somehow damage the plant.

3 Q Do you know what's used to kill those worms?

4 A Actually, what we used, there is a wasp that  
5 lays its eggs on the worm, and sometimes you can see on  
6 these worms these white casings, it looks like jewelry.  
7 And usually I just leave them alone because that pretty  
8 much means that those little baby wasps in there are  
9 going to eat the worm and then more little babies are  
10 going to spread and do that.

11 I used to use Seven dust before I read up on  
12 that. So it was better to leave them alone. And  
13 sometimes I would pick them off. But what tobacco  
14 farmers use in terms of it, I used to know. I don't  
15 remember.

16 Q In your last answer, when you were saying "I,"  
17 what did you mean by that? In your own backyard or in  
18 your neighbor's backyard you'd do those things? Or you  
19 as an employee of Philip Morris?

20 A Me as Richard Carchman, a person.

21 Q You don't know what Philip Morris used?

22 A Actually, Philip Morris, when I was there,  
23 didn't grow tobacco in the United States. It bought it  
24 from other people. And what the farmers used, that's  
25 federally controlled, usually by in terms of what they

9

1 used and how they applied it by the label that was given  
2 by the EPA because I was involved in some of the  
3 labeling for it, not for that critter but for some other  
4 things.

5 And the Philip Morris leaf department has  
6 agronomists that spent a lot of time with the state  
7 universities, like North Carolina State University, for  
8 example, land grant universities that had, that have the  
9 responsibility of working with farmers, not just tobacco  
10 farmers. So Philip Morris agronomists in the leaf  
11 department would go around and participate in education  
12 and I guess what's known as good agricultural practices:  
13 what you use, how you use it, when you use it.

14 And there are at least two important reasons or  
15 three important reasons for Philip Morris to do that,  
16 and they still do it.

17 Q They, Philip Morris, still does it?

18 A Yes.

19 Q What are the three important reasons?

20 A One, if Philip Morris is going to buy the  
21 tobacco, it wants to make sure that anything that's used  
22 -- I'm not limiting myself to pesticides -- anything  
23 that's used is used in a way consistent with good  
24 agricultural practices, and in the case of pesticides,  
25 whatever the label, the government-approved label says.

1 So Philip Morris is going to buy this. So it wants to  
2 try to make sure that things are being used properly.  
3 Secondly, it is not a cost-effective venue for  
4 the farmers to use these things inappropriately because  
5 all of these things are very, very expensive. And it  
6 was, I think, part of an attempt by the company to try  
7 to make sure that the farmers use, whether it was  
8 fertilizers or pesticides, that they also saw the  
9 economic value to themselves, because if they used them  
10 inappropriately, it probably cost them money either in  
11 terms of an inferior product or spending money  
12 unnecessarily.

13 And I think the third reason had to do with the  
14 fact that if Philip Morris is going to purchase this and  
15 then use this in its product and/or export this product,  
16 there are many places that have very clear and stringent  
17 regulations about residue levels of some of these  
18 things.

19 So it needed to be on top of these kinds of  
20 issues, and so it has people whose main responsibility  
21 is to do that.

22 Q So who has regulations about residue?

23 A For example, the German government has residue  
24 tolerances. There are other countries in the EU. Maybe  
25 there is an overall EU regulation. It's been awhile

1 since I've looked at it. In the United States it's not  
2 a residue issue. It's an issue of using the material as  
3 the label dictates because there are not only issues  
4 with regard to the product, whatever the product is,  
5 there are important environmental issues.

6 But there are European countries with residues.  
7 I know because I had lunch with one of the leaf guys  
8 last week, and we were talking about one of the  
9 residues. That's a potential issue for export products,  
10 and therefore the company was paying more and more  
11 attention to this particular material.

12 Q The stuff that's used to kill the worms isn't  
13 good for people either, is it?

14 A Well, I would say that anything, any kind of  
15 pesticide, if used inappropriately, poses a risk to both  
16 the applicator as well as potentially the user of the  
17 product. That's why the label directions say "approved  
18 by the EPA." It takes those kinds of things into  
19 consideration.

20 So the answer to your question is if the  
21 material is used properly as dictated by the label, then  
22 my answer would be not within the parameters set forth  
23 by the government, no.

24 Q I don't really, for purposes of this question,  
25 care about the parameters set by the government. I'm

1 just asking you, isn't the stuff in your opinion -- if  
2 the answer is no, it isn't harmful, just tell me.

3 Isn't the stuff that's used to kill the worms  
4 potentially harmful to other humans?

5 A Potentially harmful, yes.

6 Q To your knowledge, has Philip Morris ever  
7 tested that stuff at all to see if, when it's part of  
8 the tobacco smoke, it's harmful to people?

9 A I can't speak to the tobacco worm itself, but I  
10 know that the manufacturer, pesticide manufacturers and

11 distributors, in order to get approval for use have to  
12 demonstrate both efficacy and safety parameters to the  
13 government.

14 Philip Morris, in my personal experience, was  
15 intimately involved in making sure that the testing that  
16 was being done, that it was comfortable with and in fact  
17 helped support some studies for some of these companies.  
18 We have had -- I don't think it's in operation anymore  
19 -- a greenhouse where we can grow radioactive plants,  
20 radioactive tobacco plants.

21 And so over the time I was there, and because  
22 I've read some of the reports prior to me coming, there  
23 was some collaborations between Philip Morris research  
24 and development with leaf department help and the people  
25 who were manufacturing the pesticide.

13

1 And, in fact, I participated up in Washington  
2 with a relabeling for a particular pesticide that Philip  
3 Morris was interested, very much interested in making  
4 sure it happened. And we -- I personally actually  
5 monitored some outside toxicology studies on this  
6 material, and that was written up and presented to the  
7 government. That's my experience.

8 I can't tell you about the specific pesticide  
9 for the tobacco worm. But my experience with other  
10 pesticides that end up on tobacco, the leaf department,  
11 was that was their responsibility and we supported their  
12 efforts. And we actually worked with some of the  
13 manufacturers to help them with some of the either  
14 creating some radioactive materials, radioactive plants  
15 and/or in helping monitor some of the toxicology  
16 studies.

17 Q Well, I won't restrict my question to the kind  
18 of poisons that are used for tobacco worms. It's just  
19 talking about the kind of stuff that's sprayed on  
20 tobacco that may potentially be harmful to people,  
21 sprayed on while it's growing in the field that may be  
22 potentially harmful to people.

23 Has Philip Morris ever taken a match to that  
24 and lit it up and analyzed it as part of the tobacco  
25 smoke to see if, when it's part of the smoke, these

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1 pesticides are dangerous to people?

2 A I can answer part of the question. Number one,  
3 Philip Morris was involved in reviewing the residue  
4 level that was required for the manufacturers to present  
5 to the government. And independent of what the  
6 manufacturers did, Philip Morris also did its own  
7 residue measurements. So that's two.

8 Three, cigarettes were made from such tobaccos  
9 and they were smoked, and smoke chemistry was done on  
10 those to look to see if some of the byproducts that  
11 might be generated and/or the pesticide itself was  
12 transferred to the smoke, and if so, at what levels.

13 Other than that and monitoring some of the  
14 toxicology studies and being aware of what the  
15 manufacturers were doing in the toxicology literature, I  
16 believe that's the extent of my knowledge about what the  
17 company did.

18 Q If Philip Morris is monitoring tobacco smoke in  
19 whatever way it does, that you know all about, and  
20 checking the constituents of the smoke for whatever they  
21 checked it for, how did they know what part of that

22 comes from the pesticides?  
23 A That's where some of the radioactive studies  
24 come from, where we actually could take tobacco and  
25 apply radioactive pesticide on it and then, with the  
15  
1 analytical chemistry and radiochemistry, actually see  
2 what's going on. There were actually attempts for some  
3 pesticides to look at the consequences of processing on  
4 residue levels.  
5 And the reason for that is when you take  
6 tobacco and start to process it, there are a large  
7 number of washing with water and drying responses. And  
8 for many of these pesticides, they just disappeared in  
9 the waste wash from this.  
10 For those in which you still had residue left,  
11 the company actually looked at the residue in what would  
12 be the final cigarette and with radiochemistry they  
13 were -- I can't say with certainty which pesticides they  
14 looked at, but clearly some pesticides are easier to  
15 follow than others.  
16 So if you have halogenated pesticides, things  
17 with chlorines and bromines on it, the way the  
18 analytical chemistry and radiochemistry is, you can  
19 measure vanishingly small levels of these things, if  
20 they exist, either in the tobacco or in the smoke.  
21 Q Has Philip Morris done that?  
22 A I have been involved in some of that. Can I  
23 tell you which pesticides they've done this for? Not  
24 off the top of my head.  
25 Q How do you figure that out?  
16  
1 A I was directly involved in --  
2 Q Bad question. Let me interrupt your answer so  
3 you won't answer a bad question.  
4 How now can you figure out where the  
5 information is?  
6 A I would go to the leaf department.  
7 Q When the leaves get -- what is it when you  
8 throw it in the barn and heat it up?  
9 A There are couple of ways. You can air dry it.  
10 Where I live now, that's how they used to do it. And  
11 the other is you provide a heat source to do it. You  
12 either burn something in there and generate the heat or  
13 more recently they have reinitiated something they were  
14 doing thirty years ago, and that's using these heat  
15 exchangers to basically -- but it's the same process.  
16 You end up with a different quality of tobacco,  
17 but basically you're trying to dry it.  
18 Q So in the barns where you're using a heat  
19 source, is gasoline or kerosene ever used as a heat  
20 source?  
21 A I don't know. I don't know. They used to use  
22 wood, but I'm not familiar with the intricacies of that.  
23 I would be surprised if there was direct exposure of  
24 tobacco to combustion of petrochemicals.  
25 Q What do you mean by "direct exposure"? In the  
17  
1 same room as?  
2 A If you had a pot of gasoline or diesel fuel and  
3 you ignited it and then the tobacco is hanging in there,  
4 I would be surprised.  
5 Q Why?  
6 A My surprise is only based on the fact that I

7 don't know.  
8 Q You don't know why you would be surprised?  
9 A No. I don't know why they would do it that  
10 way.  
11 Q What would be the downside?  
12 A There are things in gasoline, especially in the  
13 old days, when you had a lot of leaded gasoline where I  
14 would expect you would get lead deposited. You'd also  
15 get a variety of organic material combustion products,  
16 which I don't think would be necessarily helpful.  
17 The issue is to dry the tobacco and not add  
18 anything else to it if you can. And you would be adding  
19 other things.  
20 Q You don't think combustion products or  
21 byproducts would be helpful or healthful?  
22 A Both.  
23 Q What kind of tobacco is grown down in the South  
24 Carolina area? Do you know?  
25 A Well, down south in Georgia and South Carolina,  
18  
1 they grow a lot of burley tobacco.  
2 Q Are the drying techniques for burley different  
3 just because it's burley?  
4 A I think so.  
5 Q Why?  
6 A I don't know. I don't know. I remember going  
7 to some talks that the leaf department gave in 1989 on  
8 this, but it was nothing I kept in my head.  
9 Q You were sort of getting the grand overview of  
10 Philip Morris? Was that it?  
11 A Yes.  
12 Q What do you think would be bad residue from  
13 burning diesel or kerosene gasoline in an enclosed barn  
14 to dry out the tobaccos?  
15 A I said lead, but I would include all the heavy  
16 metals.  
17 Q Tell us.  
18 A Well, depending upon the nature of the diesel  
19 fuel, you could have a wide array of heavy metals from  
20 arsenic to cadmium. In the case of leaded gasoline, you  
21 would have lead.  
22 Q Did Philip Morris ever test for that kind of  
23 stuff?  
24 A We tested the smoke from our cigarettes for  
25 heavy metals at various points in time and in some  
19  
1 places in the world, not in the United States, where  
2 this was more related to an environmental issue, not to  
3 a curing, this kind of hypothetical that you're raising  
4 with me.  
5 Q Why in places other than the United States was  
6 it an environmental issue?  
7 A Because in Poland, for example, where the  
8 environment was totally loused up by the Soviet Union,  
9 the air and water and all the agricultural products were  
10 in such bad shape that the Polish government was  
11 actually monitoring all of this stuff.  
12 And we were very concerned because they grow  
13 tobacco in Poland too, and Philip Morris might find  
14 itself at some point buying some of this tobacco. And I  
15 think it wanted to make sure that that was not going to  
16 be an issue for us.  
17 So we monitored that, but the government was,



18 Polish government was also interested in that as well.

19 Q And you told me why the Polish government was  
20 interested?

21 A I did.

22 Q Why did Philip Morris buy Polish-grown tobacco  
23 for?

24 A Philip Morris buys tobacco everywhere in the  
25 world it can. At the time Philip Morris was in

20

1 negotiations with the Polish government to buy some of  
2 the Polish government's tobacco monopoly. The Polish  
3 government, like several other countries around the  
4 world, was in the business of growing tobacco and  
5 manufacturing and selling cigarettes.

6 With the demise of the Soviet Union and  
7 capitalization, liberalization, whatever you want to  
8 call it, there were attempts to spin off, sell some of  
9 the businesses. And that would include this tobacco  
10 cigarette monopoly.

11 And Philip Morris was at that time considering  
12 buying some. They eventually bought some of the  
13 facilities.

14 Q Was Poland part of the Soviet Union?

15 A Poland was a satellite country for many decades  
16 following the end of World War II. It was part of what  
17 is the, what was their version of NATO. Doesn't exist  
18 anymore, but they were part of that.

19 Q Did Polish tobacco come to the United States?

20 A I don't know. I don't think so, but I don't  
21 know.

22 Q Did Turkish -- is there such a thing as Turkish  
23 tobacco from Turkey?

24 A There is Turkish tobacco from Turkey that comes  
25 to the United States.

21

1 Q What did Philip Morris use that for?

2 A It's used in what's called the Oriental  
3 tobacco, of which Turkey is one such country. There are  
4 several other countries in that part of the world,  
5 Bulgaria.

6 Q Everyplace where there isn't NASCAR racing is  
7 part of the Orient?

8 A Is that right? That's cute.

9 So Oriental is one of the tobacco components in  
10 American-blended cigarettes, in Philip Morris  
11 cigarettes.

12 Q All of Philip Morris?

13 A I believe in the United States, I believe  
14 that's true.

15 Q Marlboros in other countries are made from  
16 tobacco different than the Marlboros in the United  
17 States?

18 A I think that depends on the country. There are  
19 some countries, for instance Japan, where Japanese  
20 tobacco manufactures Marlboro cigarettes for Philip  
21 Morris in Japan. And Japanese law requires that you  
22 have to use, if you're going to manufacture in Japan,  
23 you have to use Japanese tobaccos.

24 So Japanese tobaccos are used, at least for  
25 Marlboros manufactured for Philip Morris in Japan, by

22

1 Japanese tobaccos.

2 Q And Japanese tobaccos are not Oriental

3 tobaccos?

4 A Absolutely correct. Absolutely correct.

5 Q Go ahead. I interrupted you.

6 A In terms of other countries in which Marlboro  
7 is manufactured in that country, I am not knowledgeable  
8 about that other than to say that the locally  
9 manufactured Marlboros are not necessarily identical to  
10 the Marlboros manufactured and sold in the United  
11 States. And there are, either because the tobaccos are  
12 locally grown, they're different. There may be  
13 regulations in terms of tar and nicotine yields that  
14 require a different kind of construction.

15 But I'm far from an expert on that.

16 Q What countries have manufacturing plants for  
17 Marlboros?

18 A Germany. That would be Philip Morris Germany.  
19 I indicated in Japan, it would be the Japanese tobacco  
20 monopoly that would manufacture. I don't believe Philip  
21 Morris has any manufacturing, cigarette manufacturing  
22 facilities in Japan.

23 In Russia I think we have several manufacturing  
24 facilities. In the Netherlands, Switzerland, the United  
25 States. We have a big facility in Malaysia, but I'm not

23

1 necessarily sure that they do anything other than  
2 process tobacco. They may manufacture cigarettes, but  
3 when I was with the company, they were not up at that  
4 level.

5 Q Let me just stop you for a second. What I'm  
6 looking for is places that make Marlboro cigarettes.

7 A Germany, Japan, the United States and maybe  
8 Switzerland. There could be others, but those are the  
9 ones that I'm aware of.

10 Q Is there American-grown tobacco in any of the  
11 Marlboro cigarettes except the ones that are made in the  
12 United States?

13 A I don't know. I don't know.

14 Q I should know this, but I'm not a good listener  
15 I guess. Is Philip Morris doing some kind of testing of  
16 Marlboros for biological activity?

17 A The answer is yes.

18 Q Starting when?

19 A In the end of 1999, the beginning of 2000.

20 Q Where are the tests being conducted?

21 A In Germany at the Institute for Biological  
22 Research in Cologne.

23 Q Are the tests being done with Marlboros  
24 manufactured in Germany?

25 A No.

24

1 Q Why?

2 A They're being done, the first series of tests  
3 involve somebody going to the store in the United  
4 States, buying nine different Philip Morris brands,  
5 including several different Marlboro brands, and those  
6 were then shipped to Germany for testing.

7 Q To your knowledge is Philip Morris testing one  
8 Marlboro? For the sake of argument, let's just say  
9 Marlboro Red. What's the standard size?

10 A Marlboro Red is what I would call the original  
11 Marlboro.

12 Q How long are they?

13 A Pardon?

14 Q How long are they?  
15 A 85 millimeters.  
16 Q Has anyone at Philip Morris gone out and bought  
17 a pack of 85 millimeter Marlboro Reds in the United  
18 States and tested it against 85 millimeter Marlboro Reds  
19 manufactured in other countries for biologic activity?  
20 A Not yet, to my knowledge, for that specific  
21 kind of Marlboro. There is data we have on other  
22 Marlboros that has within it a German Marlboro -- and  
23 it's a lower delivery product, an ultralight -- and a  
24 U.S. Marlboro ultralight. There is testing that's going  
25 on, biological testing, with that. I've seen some data

25

1 on that.

2 Q What's the purpose of that, testing one against  
3 the other?

4 A Actually, it's not one against the other.  
5 There are two buckets of biological testing. One is  
6 what I would call, what for us or I would describe as  
7 historical toxicology testing, including smoke  
8 chemistry. That's one.

9 The second bucket involves evaluation of our  
10 products in smokers where we're actually measuring  
11 tobacco smoke constituents in smokers in the biological  
12 fluids from smokers in let me call them biomarkers of  
13 exposure. And there's within that group another series  
14 of materials that are looked at that are called  
15 biomarkers of effect, which may be related to some  
16 disease or pathological state.

17 And so we are looking at exposure, quote  
18 unquote, exposure, quote unquote, effect, in humans who  
19 smoke a variety of Philip Morris products. Some of them  
20 are commercial products and some of them are  
21 experimental products.

22 So when you say "biological activity," I'm not  
23 limiting myself to any resource outside of toxicity.  
24 I'm giving you both pieces.

25 Q Did you have anything to do with setting up the

26

1 current testing in Cologne for biologic activity?

2 A I would say the answer is yes.

3 Q What?

4 A When I came to the company, one of my first  
5 responsibilities dealt with going to the Institute and  
6 looking at the Institute and seeing what they were doing  
7 and how they were doing it and being involved in what  
8 some people call planning or strategic planning and both  
9 within the company, within the scientists within the  
10 company and with outside scientists, either in a formal  
11 scientific advisory board that was dedicated to the  
12 development and use of new assays -- and that existed  
13 for several years -- to other scientific advisory boards  
14 that dealt with the validation of those assays, the use  
15 of data from those assays.

16 I have been intimately involved in working with  
17 those scientific advisory boards at a number of levels.  
18 And I continue to this day. I'm the secretary for the  
19 company for a new product scientific advisory board that  
20 continues to be intimately involved in assay, assay  
21 development and assay use.

22 And I guess one of the things with some of my  
23 colleagues both inside and outside the company is to  
24 broaden what we can look at and not just focus on

25 mutagens and carcinogens but look at cardiovascular

27

1 disease models, look at lung disease, in addition to  
2 lung cancer. So chronic obstructive pulmonary disease,  
3 chronic bronchitis, those kinds of models.

4 They don't exist at this moment in time in a  
5 form that one could do the kind of screening, but we're  
6 getting closer to being able to do that with some of the  
7 molecular, biological and genetic engineering tools that  
8 have become available in the last couple of years.

9 Q When was the last time you were in Cologne,  
10 Germany?

11 A A month or so ago.

12 Q Why?

13 A I may be off by a month, but it's been within  
14 the last three months.

15 There was a meeting on carbon monoxide, and I  
16 actually made a technical presentation on carbon  
17 monoxide. And it had to do with the health consequences  
18 of carbon monoxide exposure, the scientific and medical  
19 basis for that, and trying to understand the U.S.  
20 warning label that actually talks about carbon monoxide,  
21 what was the basis for them including that on the  
22 warning label. And I made a technical presentation on  
23 that.

24 We have a product that basically delivers no  
25 carbon monoxide, and we have measurements in smokers

28

1 over various periods of time looking at a number of  
2 these biomarkers of exposure. And these smokers of  
3 these products are indistinguishable from nonsmokers in  
4 terms of carboxyhemoglobin or CO exhaled from these  
5 folks, and if carbon monoxide is playing an important  
6 role, having such a product and then being able to  
7 generate the data which will -- which is being presented  
8 at scientific meetings, but to lay it out before the  
9 scientific and public health community and sort of see  
10 what they think about this and get some suggestions from  
11 them in terms of where we go with this.

12 So that was the last meeting I was at. There's  
13 another meeting next month that I've been invited to,  
14 another scientific meeting. I don't know if I will go  
15 or not.

16 Q Has this been presented to the public health  
17 community?

18 A The first piece I just told you about?

19 Q Yes.

20 A Actually, to various elements within the public  
21 health community and at some scientific meetings.

22 Q What's the response?

23 A I think very positive but I think, correctly  
24 so, cautious because though CO is the only smoke  
25 constituent that's listed on the federally mandated

29

1 warning label, the only one there, and its importance  
2 would relate to cardiovascular disease.

3 And in the United States population,  
4 cardiovascular disease is probably the heavy hitter for  
5 morbidity and mortality, and there very well could be  
6 some benefit in that regard. The question remains:  
7 What about all the other stuff?

8 Q What's morbidity?

9 A Being sick, ill.

10 Q What's heavy hitter? The leading cause of? Is  
11 that how you define it?

12 A Yes. I'm very sorry.

13 Q Don't be sorry.

14 A I'm sorry. So if you have like 2.2 million  
15 people die a year in the United States, close to a  
16 million die related to cardiovascular disease. So I  
17 don't mean to trivialize it.

18 Q You're not. And of those million -- is that  
19 what you said, "million"?

20 A Close to a million, yeah.

21 Q How many are smokers?

22 A Well, I can tell you that there's probably an  
23 over-representation of smokers in that group. In the  
24 United States population approximately 25 percent of  
25 adults smoke. So there's at least 25 percent. I think

30

1 it's, like I said, it's over-represented, which means  
2 it's a larger number. How much larger I don't know.

3 MR. PIUZE: His last answer, I cut him off.

4 (The record was read as follows:

5 "Q The question remains: What  
6 about all the other stuff?")

7 Q BY MR. PIUZE: What other stuff?

8 A That actually is another one of those very  
9 important questions. So here we're talking about one  
10 smoke constituent and one important smoking-related  
11 disease, cardiovascular disease. The smoke constituent  
12 is carbon monoxide.

13 What about lung cancer? What about emphysema,  
14 chronic obstructive pulmonary disease? What are the  
15 other things in there? Carbon monoxide is probably not  
16 playing a very important role in those entities. And so  
17 what about tobacco specific nitrosamine levels in  
18 smokers? And we have, we've looked at that. What about  
19 nicotine in these folks? And we've looked at that.

20 So the information on carbon monoxide is being  
21 presented not in isolation but with the menu of things  
22 that we have examined and looked at. And we actually  
23 got input from some public health folks and scientists  
24 before we actually did this study.

25 Q So you were asked what about nicotine? Go

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1 ahead and answer your own question. What about  
2 nicotine?

3 A Well, carbon monoxide is a gas phase component  
4 in tobacco smoke. Nicotine is a particulate phase  
5 marker. In the particulate phase, is nicotine tracking  
6 some of the other things that are in the particle phase?  
7 And tobacco specific nitrosamines would be one.  
8 Benzo(a)pyrene or polyaromatic hydrocarbons would be  
9 another one.

10 And so we looked at people smoking different  
11 kinds of Philip Morris products, including this product  
12 that delivers almost no carbon monoxide. And the data,  
13 and it's still coming in, appears to be consistent with  
14 some other published reports, that is, that you may see  
15 a 99 percent reduction in carbon monoxide, but the  
16 nicotine, the proportional change in nicotine is not  
17 proportional. There's something else going on.

18 And we're not sure exactly what's going on,  
19 whether it has to do with the methodology that we're  
20 applying here and how we're applying it and/or the

21 complexities of the variability in how people not  
22 necessarily people smoke because in these studies,  
23 that's highly controlled.

24 These are, at this point the studies I'm  
25 talking about, are all people that are confined in a

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1 clinical research unit and they're being observed for  
2 eight days or so. But how they metabolize the nicotine.  
3 And nicotine metabolism and excretion vary normally  
4 between people and even within the same person over  
5 different times of the day or the week or the month.

6 And so you have to somehow weigh the power and  
7 sensitivity of your assay and the enormous biological  
8 diversity or heterogeneity you see in the population.  
9 And that's a problem for something like nicotine. It's  
10 not a problem for carbon monoxide.

11 And people have been trying to examine this and  
12 deal with this for 20-something years. We think we've  
13 made some improvements, but I will wait until I see the  
14 rest of the data and see what other scientists and the  
15 public health folks have to say about it.

16 Q When you use the term "public health," "public  
17 health folks," what do you have in mind?

18 A The World Health Organization, the National  
19 Cancer Institute. Greg Connolly, Dr. Connolly up in  
20 Massachusetts. David Burns in San Diego, Neal Benowitz  
21 in San Francisco.

22 Dr. Benowitz, Dr. Burns, these are people that  
23 have been and are being consulted about what we were  
24 doing, how we were doing it, and they've made some  
25 suggestions over the time that we've incorporated in

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1 this. And I think Dr. Solana, who is the head of this  
2 whole program for Philip Morris, is pretty much in  
3 regular communication with Dr. Burns.

4 And some of his scientists, including myself,  
5 from time to time have spoken with and/or met  
6 Dr. Benowitz and gone over some things that we're doing.

7 And some of the results have been presented at  
8 a National Cancer Institute-sponsored meeting in  
9 Minneapolis -- Minnesota. In Minnesota for sure. Some  
10 were presented this spring at the Society of Toxicology  
11 meeting in Memphis maybe or Nashville. And I've just  
12 seen some more abstracts that are being put together for  
13 some other meetings.

14 So Dr. Solana and his colleagues have, through  
15 the standard scientific process, publications and  
16 meetings and abstracts, and then through trying to build  
17 some bridges with the Drs. Connollys, Burns and  
18 Benowitzes of the world.

19 Q It doesn't surprise me that you would include  
20 those three men under the umbrella of public health  
21 officials. But when you say "public health officials"  
22 or "public health," rather than give me examples of  
23 people who qualify, what do you mean?

24 MR. MAUNEY: I object to the commentary. You  
25 can answer.

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1 THE WITNESS: Could you repeat that, please.

2 Q BY MR. PIUZE: Yes, but first I want to repeat  
3 the commentary.

4 Define public health official or public health  
5 as you have been using those terms.

6 A Okay. Sometimes it's pretty easy. The World  
7 Health Organization is a body that contains within it,  
8 nested within it a number of sub-organizations that are  
9 defined by me and probably others as public health  
10 entities. And they have a tobacco control group that is  
11 putting together tobacco control guidelines.

12 Q Some of them are still getting over their party  
13 in Geneva, aren't they?

14 A I think so.

15 Q They weren't smoking cigarettes, were they  
16 either?

17 A Not tobacco anyway. But then you have  
18 Dr. Connolly, who is the head of public health in the  
19 Commonwealth of Massachusetts. So I think his title and  
20 his behavior, more so than just his title, but clearly  
21 his title, his historical activities in this area I  
22 think make him a bona fide member of that community.

23 Dr. Burns and Dr. Benowitz are, have been and  
24 are, preeminent tobacco control public health people  
25 that have contributed.

35

1 Q Stop, stop, stop. You're using the term you're  
2 trying to define within the definition. So I'm going  
3 for what's public health as you mean it, and the very  
4 phrase that you're defining becomes part of the  
5 definition. Forgive me for interrupting, but see if you  
6 can cure that.

7 MR. MAUNEY: And continue with your train of  
8 thought as well.

9 MR. PIUZE: Sure.

10 THE WITNESS: I'll try.

11 I think, as a consultant to Philip Morris  
12 Tobacco Company, the issues of tobacco and public health  
13 are relevant and obvious. And so public health  
14 officials that deal with tobacco issues are public  
15 health officials that deal with what I call tobacco  
16 control, though it's not limited. I mean the Centers  
17 for Disease Control and Prevention, it's a public health  
18 organization, but it's clearly not limited to tobacco  
19 issues.

20 For doctors, somebody like Dr. Connolly or  
21 Dr. Burns and Dr. Benowitz, I would say their role in  
22 the public health community in no small way is defined  
23 by their tobacco control efforts. So I can't think of  
24 them in any other way. And it's not meant in any  
25 denigrating or pejorative way. It's just how I see

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1 them.

2 Q BY MR. PIUZE: I didn't mean to infer it was  
3 denigrating or pejorative. And at least Arnold and  
4 Porter's representative here thought just the opposite.  
5 Should I strike that commentary too?

6 MR. MAUNEY: I'm just going to let it roll.  
7 What you think about my opinion isn't really relevant.

8 MR. PIUZE: If I write down what I think about  
9 your opinion, can we attach it as an exhibit?

10 Q As to Dr. Connolly, I believe your words were  
11 not only his title, but his behavior. What did you mean  
12 by that?

13 A You could have the title. You could be  
14 president and grand pooh-bah, but what is your behavior?  
15 What are your actions? What have you done?

16 And I would say over many years his activities

17 within the Commonwealth of Massachusetts would make him  
18 a clear public health person, but his activities are not  
19 limited to Massachusetts. He really is involved on the  
20 world stage of tobacco control with the World Health  
21 Organization and the other public health officials and  
22 organizations that are involved in this whole important  
23 area.

24 He has initiated a series of commercial product  
25 tests in Massachusetts, of which Philip Morris was and

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1 is a participant of. He has put together his own  
2 scientific advisory board I think, of which Dr. Burns is  
3 the chair. And he's invited Philip Morris scientists,  
4 Dr. Solana, to come and participate sometime soon over  
5 some agenda touching on at least harm reduction.

6 As you know, Dr. Burns is sitting out here to  
7 the south of us.

8 He is a man that's not limiting his stage to  
9 the Commonwealth of Massachusetts because what he has  
10 been doing in Massachusetts has much broader public  
11 health complications.

12 Q Let's stay with the pooh-bah part of it. What  
13 is his title?

14 A He's either the commissioner of public health  
15 or the head of public health.

16 Q Roughly how long has he been that?

17 A While I was, let's say, with Philip Morris, he  
18 was there. When exactly I don't know.

19 Q When you arrived at Philip Morris in '89, was  
20 he already there?

21 A He may have been, but he was not known to me  
22 until later.

23 Q One of the things you said in maybe your second  
24 answer back was before Connolly got the title, he was  
25 doing certain activities, which, all by themselves, in

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1 your view apparently would qualify him as a public  
2 health official.

3 A If I said that, then I misspoke. What I was  
4 saying is even without that title, his activities were  
5 consistent with what I would call that kind of charge  
6 and responsibility.

7 Q Is he a medical doctor?

8 A He's a dentist I believe.

9 Q Actually, yeah, I believe you're right.

10 What kind of activities has he done in the past  
11 that you are alluding to? I know he's overseeing some  
12 tests now, but what has he done in the past?

13 A Both in terms of testing and legislative  
14 activity, of which I only know from what I read in the  
15 newspapers, in terms of sales and advertising trying to  
16 somehow limit that or modify that.

17 But for me, and only the most important for me  
18 because it directly relates to some of my interests, has  
19 to do with commercial product testing and with the  
20 Federal Trade Commission tests and what smokers might be  
21 exposed to and gathering of commercial data, at least  
22 within the Commonwealth of Massachusetts, and his  
23 participation in presentations at the Institute of  
24 Medicine meetings, hearings, that were going on prior to  
25 the publication of their 2001 report where he was asked

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1 what he was going to do with all this information he was



2 gathering and the fact that he seemed to be -- how  
3 should I put it? -- encouraging with the work that  
4 Philip Morris was doing in terms of going beyond machine  
5 testing to actually trying to measure what people were  
6 taking in for the different kinds of cigarettes that  
7 they were smoking.

8 He was one of several people whose names I've  
9 already mentioned that seemed to support our efforts as  
10 something that needed to be done, needs to be done, and  
11 provided some additional ideas in terms of how to do it  
12 better.

13 Q Based on your store of knowledge, you know that  
14 the state of Massachusetts conducted some kind of tests  
15 to see whether or not R.J. Reynolds' issues with  
16 Marlboros was correct?

17 MR. MAUNEY: Objection; vague.

18 THE WITNESS: I know some of the things that he  
19 has had done either by Bill Rickert at Lab Stat or maybe  
20 by others, but you need to give me more information.

21 Q BY MR. PIUZE: Obviously you're aware that  
22 Reynolds thought that it was losing market share to  
23 Marlboro because of increased what? Nicotine?

24 A I've never read the Reynolds internal  
25 documents. But as I understand it, it basically claimed

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1 that we were using increased amounts of materials that  
2 raised ammonia and therefore modified the kinetics of  
3 nicotine delivery to the brain in the smoker. I think  
4 that's pretty much my understanding of the claim.

5 Q Ammonia somehow supercharged the nicotine  
6 delivery?

7 MR. MAUNEY: Objection; vague.

8 THE WITNESS: I don't know if I said that.  
9 That's your --

10 Q BY MR. PIUZE: That's a question. Do you know,  
11 the last time I had chemistry, I was 17 years old. So  
12 I'm not telling you anything.

13 A That wasn't that long ago. I don't know if I'd  
14 use the word "supercharged." I think the claim is that  
15 by somehow manipulating the ammonia levels, you  
16 facilitated, increased the rate and/or the amount of  
17 delivery of nicotine to the brain.

18 Q And the way that Reynolds, even though you  
19 haven't studied their paper, the way that Reynolds was  
20 claiming the ammonia levels -- is that proper, the  
21 ammonia?

22 A I guess. I wouldn't argue with it.

23 Q The ammonia levels were changed starting with  
24 urea?

25 MR. MAUNEY: I object to the extent it calls

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1 for speculation.

2 THE WITNESS: I'm not sure, but urea is a  
3 compound that we have used that under certain conditions  
4 will release ammonia.

5 Q BY MR. PIUZE: Which conditions?

6 A Well, in a cigarette, if you have urea and you  
7 combust the cigarette as you would in a conventional  
8 product, you're going to generate ammonia.

9 Q So if you take urea, get it hot enough, it's  
10 going to generate ammonia?

11 A That's correct.

12 Q According to Reynolds, this ammonia somehow

13 made the Marlboro more likable to the smokers  
14 ultimately; right?

15 A I think that would be a colloquial way of  
16 paraphrasing it.

17 Q Best I can do. Thank you for that.

18 Do you know, again, based upon your general  
19 store of knowledge, after Reynolds made those claims,  
20 did Reynolds in effect do what it was claiming Philip  
21 Morris had done with Marlboro?

22 MR. MAUNEY: I object to the extent it calls  
23 for speculation.

24 THE WITNESS: I don't know.

25 Q BY MR. PIUZE: Is one of the things that was

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1 done in Massachusetts to test this hypothesis that R.J.  
2 Reynolds had?

3 A I can't tell you if it was the Reynolds claim  
4 that did it, but Dr. Connolly had a whole series of  
5 analyses done I think by Lab Stat, by Bill Rickert's  
6 laboratory in Canada, that amongst other things it was  
7 not limited to and it may not have -- I'm not  
8 knowledgeable enough to know whether it was the Reynolds  
9 claim itself, but they looked at a wide variety at what  
10 I would call ammonia- and nicotine-related issues in the  
11 commercial products that they had.

12 Q "They," meaning the Canadian laboratory?

13 A Using the Massachusetts products, yes.

14 Q Were the results of these studies published?

15 A They are publicly available. Whether they were  
16 actually published in a scientific journal, I don't  
17 know.

18 Q Did the state of Massachusetts publish it,  
19 publish their thoughts on these tests which the people  
20 of the state of Massachusetts paid for?

21 A I don't know the answer to that.

22 Q Did Dr. Connolly announce any conclusions?

23 A I think he did, but as I sit here today, I  
24 can't tell you what they were.

25 Q Did he find that ammonia that came into

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1 existence after urea was heated up in a cigarette did  
2 alter the delivery patterns of nicotine?

3 A One, I don't think he necessarily had the  
4 cigarette design elements to answer the first question,  
5 nor did I think his tests would give anything but at  
6 best a most circumspect view of the answer to your  
7 second question.

8 Q So we have a clear record, why don't you state  
9 my second question as you understand it so we know what  
10 your circumspect view is.

11 A Your second question had to do with nicotine  
12 delivery, and you did not specify nicotine delivery in  
13 the smoker, nicotine delivery to the smoker. And since  
14 I know what he did, it's nicotine delivery in the smoke.

15 And the nature of the analytical evaluations  
16 could only tell you whether there was more nicotine or  
17 some different amount of nicotine in the smoke with no  
18 real objective measure of whether there was speciation  
19 into the different forms of nicotine or whether there  
20 was more nicotine delivered to the smoker or to the  
21 smoker's brain.

22 Q Let's leave the smoker out of it then. What  
23 about just in the smoke? What was the result of the

24 tests?

25 A My recollection, and it's been awhile since

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1 I've looked at it, is that there were, over a variety of  
2 commercial brands that were tested, a range of ammonia  
3 values measured both in the tobacco, in the smoke,  
4 nicotine in the tobacco, nicotine in the smoke, I think  
5 there was also so-called pH determinations.

6 And my recollection was that in general there  
7 didn't seem to be anything to me that was remarkable in  
8 terms of things that you would say, you know, oh, my  
9 God. You know, the Reynolds claim has some scientific  
10 significance.

11 Q Conversely, was there anything there that made  
12 you say to yourself, Oh, my God, Reynolds was full of  
13 it?

14 A Actually, I didn't need to -- I don't know if I  
15 would describe it "as full of it," but I didn't need to  
16 wait for Dr. Connolly's report to do that primarily  
17 because, within the conventional cigarette market, there  
18 are relatively tight tolerances for these kinds of smoke  
19 constituents in terms of what's available in the U.S.  
20 market, whether it's the pH range, which is generally  
21 all on the acidic side. The fact that, just from a  
22 basic physics and chemistry perspective, ammonia is much  
23 more volatile than nicotine and in the conventional  
24 cigarette comes out long before nicotine comes out.

25 And then thirdly or fourthly, that the

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1 buffering capacity of the body, which is about pH 7.4,  
2 slightly on the basic side of neutrality, is going to  
3 make the whole question moot for commercial conventional  
4 cigarettes.

5 And it was pretty much nailed for me, I guess,  
6 in the '88 Surgeon General's report where they touched  
7 on some elements of this. And to my knowledge, there  
8 has been no retraction or modification of that  
9 statement.

10 And then there have been some publications in  
11 the medical literature that describe the effect of smoke  
12 and smoke pH and ammonia and nicotine that in my opinion  
13 -- I think it was an Australian study that comes right  
14 to my mind -- supported the '88 Surgeon General's  
15 report. So it was an interesting hypothesis that  
16 Reynolds had. Whether they did anything with it  
17 themselves, I don't know.

18 And then the final thing, which, just from a  
19 common sense perspective I don't know how you argue  
20 around is that if this is what we did to Marlboro and if  
21 this is what was responsible for its market share, I  
22 don't understand why we don't have a hundred percent  
23 market share because we have other products that are  
24 pretty much Marlboro with another name, like Benson and  
25 Hedges, and it has a minuscule market share.

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1 So if the Reynolds hypothesis was related to  
2 what we were doing to Marlboro with urea or other  
3 compounds that release ammonia, it should have been  
4 evident in other brands that had really the same  
5 innards, if you will, and it wasn't.

6 So I took all of that together and I didn't --  
7 you know, to see what Dr. Connolly got from the  
8 so-called Rickert report wasn't surprising. It wasn't

9 surprising to me. I'm always open to being surprised,  
10 but I wasn't surprised.  
11 Q The tobacco in Benson and Hedges is exactly the  
12 same as in Marlboro, isn't it?  
13 MR. MAUNEY: Objection; vague.  
14 THE WITNESS: Exactly?  
15 MR. MAUNEY: Vague as to time frame.  
16 THE WITNESS: Yeah. And I don't know over what  
17 period. At least the time that I was with the company,  
18 it was pretty much the same product.  
19 Q BY MR. PIUZE: What was different?  
20 A It had a different name. It had different  
21 packaging.  
22 Q I'm talking about the stuff inside of the  
23 paper. It was the same, wasn't it?  
24 A It was pretty much the same.  
25 Q What was different?

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1 A When you say "exactly," for me exactly means  
2 that, you know, it was the same. They split the crop  
3 year of tobacco up. Some went to Marlboro, some went --  
4 I don't know that.  
5 Q Here's an easy question. Inside of the paper,  
6 while you were at Philip Morris what was the difference  
7 between the tobacco in the Benson and Hedges and the  
8 Marlboros?  
9 A Nothing that I could put my arms around.  
10 Q That's happened to me as I get older. It  
11 happens more and more frequently.  
12 A Does it? Could we take a water break.  
13 Q Let me follow up.  
14 MR. MAUNEY: Do you need a water break?  
15 THE WITNESS: I'll wait.  
16 Q BY MR. PIUZE: Do you know his name?  
17 A Duane Mauney.  
18 Q Do you know his name?  
19 A Jonathan Beeker.  
20 Q Where is he from?  
21 A Kansas City.  
22 Q What law firm?  
23 A Shook Hardy.  
24 Q Why is he here?  
25 MR. MAUNEY: You don't have to answer that

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1 question.  
2 Q BY MR. PIUZE: Go ahead and answer the  
3 question. If you don't know, just tell me, "I don't  
4 know."  
5 A I don't know.  
6 Q Why is he here?  
7 A He's representing the company and me.  
8 Q This guy, is he representing the company?  
9 A I don't know.  
10 Q Is he representing you?  
11 A I don't know.  
12 MR. PIUZE: Let's hear it from you. Who are  
13 you representing?  
14 MR. BEEKER: I represent Philip Morris.  
15 Q BY MR. PIUZE: So anyway, recognizing that  
16 Philip Morris has a superior product than Reynolds and  
17 certainly has superior lawyers than Reynolds, and even  
18 recognizing it had superior research people than  
19 Reynolds, can you explain, we still know that Reynolds

20 has pretty good lawyers and pretty good researchers.  
21 But how did their chemists go so far astray  
22 when they came up with this hypothesis that Marlboro  
23 sales were being propelled because ammonia was doing  
24 something to the nicotine to make it a much more  
25 satisfying smoke to smokers?

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1 MR. MAUNEY: Objection; vague, calls for  
2 speculation.

3 THE WITNESS: If I was a fortune teller, I  
4 would try to help you out. But I'm not, and maybe you  
5 ought to ask the Reynolds people.

6 Q BY MR. PIUZE: Well, one of the things you said  
7 in one of your long answers was in effect it's common  
8 sense to me, Dr. Carchman. You have a Ph.D. in what?  
9 Chemistry?

10 A No.

11 Q In what?

12 A My Ph.D. is in Pharmacology.

13 Q In pharmacology. That tells me because of  
14 certain things, including pH levels, including  
15 alkalinity, acidity, this hypothesis doesn't really make  
16 it. That's fine. What do I know, as I said.

17 But, anyway, if that's so obvious to you with a  
18 Ph.D. in pharmacology, didn't Reynolds have folks with  
19 your kind of educational background down there when they  
20 came up with this hypothesis?

21 MR. MAUNEY: Same objection.

22 THE WITNESS: For sure they absolutely did.  
23 And why they did it may have nothing to do with science.

24 Q BY MR. PIUZE: So you're saying on its face,  
25 without doing a bunch of experiments -- experiments are

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1 nice -- but without doing the experiments, you can  
2 pretty much take a look at this hypothesis and say it  
3 just doesn't wash?

4 A That's right.

5 MR. PIUZE: Go ahead on your water break if you  
6 like.

7 THE WITNESS: Thank you.

8 (Whereupon, a recess was taken.)

9 (The record was read as follows:

10 "Q Did he find that ammonia that  
11 came into existence after urea was  
12 heated up in a cigarette did alter the  
13 delivery patterns of nicotine?")

14 Q BY MR. PIUZE: "He" refers to Dr. Connolly.

15 A My answer was I don't think he had the  
16 cigarette designs to answer that question.

17 Q You told me that you couldn't tell because the  
18 smoker wasn't tested; right?

19 A That was the second part of your question.

20 Q What about the smoke? He tested the smoke to  
21 see if this hypothesis was correct, didn't he?

22 A He tested the smoke, and to my knowledge there  
23 was nothing remarkable in the nicotine, in the nicotine  
24 delivery either as it relates to ammonia.

25 Q Did the state of Massachusetts publish any

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1 results on this?

2 A I don't know. I think so but I don't know.

3 Q Did you read your testimony from Boeken versus  
4 Philip Morris in order to prepare for this?

5 A No.  
6 Q You have not read anything to prepare for this  
7 deposition I take it?  
8 A No, I haven't.  
9 Q What's the last case in which you testified?  
10 A Not deposition but court.  
11 Q Let's include both, please. Either depo or  
12 trial testimony.  
13 A Last week I was deposed in a case called  
14 Harvey.  
15 Q Where?  
16 A In Richmond, Virginia. It's a San Francisco  
17 case I think it's filed in, yes.  
18 Q Who were the plaintiff's attorneys?  
19 A Fellow named Gil. I don't remember his last  
20 name.  
21 Q Before that? I apologize. Gil is being the  
22 first name or the last name?  
23 A Yes, sir. Gil is the first name.  
24 Q Purcell?  
25 A Thank you. That's exactly correct.

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1 Q Would I mislead you?  
2 A I hope not. I hope not.  
3 And prior to that I was a week before deposed  
4 in the Department of Justice case in Richmond in their  
5 federal office for two days as an expert.  
6 Q How long did Purcell take?  
7 A The whole day till 5:30 in the afternoon.  
8 Q What kind of things did he ask you? Haven't  
9 you said all this stuff before already?  
10 A Actually, he focused primarily on my statement  
11 in terms of trying to find out what I was going to  
12 testify about. And I think, paraphrasing, he said, I  
13 need to know what it is you're going to say so I'm not  
14 surprised. So I said okay. And so we spent primarily  
15 the whole day talking about what I was going to say.  
16 It turns out this is not simply a smoking case.  
17 There's also an asbestos component. So we talked about  
18 asbestos, and we talked about asbestos and smoking as  
19 well.  
20 Q What about the Department of Justice? What is  
21 name of the lawyer from the Department of Justice that  
22 took your deposition?  
23 A Goldfaber. I went to school with his father.  
24 Q What's his first name?  
25 A Andy. Andrew. And that was the second time.

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1 I was deposed the year before as a fact witness for the  
2 Department of Justice, and this was the second time, now  
3 as an expert.  
4 Q You're an expert on whose behalf?  
5 A Philip Morris's.  
6 Q What did Mr. Andrew Goldfaber talk to you about  
7 for two whole days?  
8 A A lot of stuff was new stuff, new Philip Morris  
9 documents that I would say in my terms is relatively hot  
10 off the presses. Some of it was proprietary  
11 information. So everybody there, not me or my lawyers,  
12 had to sign confidentiality agreements. And I still  
13 haven't seen the deposition because it's still being  
14 gone over, looking for proprietary aspects.  
15 Q So you guys get to make the United States of

16 America sign confidentiality agreements?  
17 A The videographer and the court reporter at  
18 least. I don't know about lawyers. Lawyers are so  
19 honest, they don't have to sign anything.  
20 Q Because I don't know who the United States of  
21 America would tell that to. They wouldn't tell it to  
22 Cuba on that, do you think?  
23 A I bet you're right.  
24 Q Before that, what was the last testimony you  
25 gave?

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1 A I testified in the Schwarz case in Portland,  
2 Oregon.  
3 Q In person?  
4 A I hope so.  
5 Q And before that?  
6 A You're pushing me. I tend to forget these  
7 things as soon as they happen.  
8 Q You do a very good job as you just proved with  
9 your last three answers.  
10 A I really don't know.  
11 Q Here we are in mid-May in 2002. How many times  
12 have you testified?  
13 A Less than six. Four or five times.  
14 Q You get paid the same amount of money whether  
15 you testify or not, right or wrong, by Philip Morris as  
16 part of your consulting agreement?  
17 A I don't think so. What do you mean, if I  
18 testify or not? You mean -- I get paid for today, and  
19 whether I testify or not, I get paid for today.  
20 Q Yes. This is one of your 150 days for the  
21 year; right?  
22 A That's correct.  
23 Q Why is this day different than any other day?  
24 It isn't.  
25 A (Inaudible response.)

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1 Q Is that a chemical process?  
2 A No. That's a religious process  
3 Q So the point being, you're testifying today.  
4 You could be sitting in the lab today. You could be  
5 giving a lecture or a speech or doing anything. You get  
6 paid the same amount by Philip Morris for your  
7 consulting time?  
8 A Yes. Yes, sir.  
9 Q How long is your consulting contract for?  
10 A Another year and a half.  
11 Q What was the initial term of the consulting  
12 contract?  
13 A Five years.  
14 Q When were you first aware of Dr. Connolly's  
15 activities, I forget the words you used, but let's use  
16 "activities" that brought him to your attention and  
17 someone you thought could be a public health person?  
18 A You asked me that question before. And the  
19 best I can do was not when I first came to Philip  
20 Morris. It was sometime after, but clearly before I  
21 retired.  
22 Q I didn't think it was the same question, but I  
23 guess you're right. What was it that he was saying that  
24 brought him to your attention?  
25 A It, I believe, had to do with testing

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1 commercial products and how he wanted them tested and  
2 what he wanted them tested. And over some period of  
3 time, a couple of years, that ended up resulting in what  
4 I call the benchmarking study that -- Dr. Rickert did a  
5 lot of the work, but Philip Morris and some of the other  
6 tobacco companies contributed effort and work to discuss  
7 with him and his colleagues what to do about how to test  
8 the product.

9 Q What kind of cigarettes have you provided to  
10 Dr. Benowitz in the past?

11 A Two kinds, one that I'm aware of. I can't  
12 speak about anybody else. In 1998 Dr. Kathy Ellis made  
13 some cigarettes up for Dr. Benowitz dealing with ammonia  
14 issues. I don't know if he ever used them.

15 More recently, Dr. Solana, actually Dr. Bruce  
16 Davies, who works in Solana's organization, has made and  
17 sent to Dr. Benowitz some cigarettes where there are  
18 gradations of tar and nicotine. And I think  
19 Dr. Benowitz is looking at this as a way for  
20 facilitating smoking cessation, that is, having smokers  
21 come down slowly in terms of this.

22 And I think those cigarettes are in his hands,  
23 and he may be using them. And Dr. Davies and actually  
24 I, but Dr. Davies now primarily, we have communicated  
25 with Dr. Benowitz that we've set up an analogous testing

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1 approach, but looking at exposure, taking much finer  
2 cuts of nicotine.

3 And actually what we're doing is we're fixing  
4 the tar and varying the nicotine and then fixing the  
5 nicotine and varying the tar because there still remains  
6 a whole variety of questions about exactly what's going  
7 on, what's going on here.

8 Our interests, Philip Morris's interests are  
9 twofold. One, if we can help Dr. Benowitz in his work,  
10 we'll do it. The second is from a harm reduction  
11 perspective, is there a way of modifying some aspect of  
12 the product such that when the smoker smokes it, they  
13 get less of the things that everybody is worried about?

14 And we think that there may be a way of, there  
15 may be one such approach to get there. Dr. Benowitz has  
16 a different question that he's -- an important question  
17 but different than the one we're asking.

18 Q Can you state Dr. Benowitz's question in Hebrew  
19 also?

20 A In Hebrew, I don't think so.

21 Q Because you did that last one pretty quick.  
22 Look like you practiced that one.

23 A I did for a long time.

24 Q In Brooklyn?

25 A Yes.

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1 Q Where Andy is?

2 A No. He was in Queens. I moved after I was  
3 confirmed. But I stated what I believe Dr. Benowitz  
4 question related to, and that is to find a way of  
5 weaning people off of cigarettes, getting them to quit  
6 smoking because the current strategies for smoking  
7 cessation, I guess the strongest statement one could  
8 make is that they're only modestly successfully, and I  
9 think that's probably a slight exaggeration.

10 So his notion, I think, involves the point that  
11 if you can very slowly step smokers down in terms of



12 what they're getting with regard to nicotine, you might  
13 be more successful in getting them to quit. I think  
14 that's part of it. I'm sure it's probably more involved  
15 than that, but that's just my simple way of looking at  
16 it.

17 Q What are the names, product names, numbers,  
18 designations of the cigarettes that were given to  
19 Dr. Benowitz?

20 A I don't know. You'd have to ask somebody in  
21 RD and E that have the codes and the legends for that.

22 Q Whenever I call over there, they refuse to  
23 speak with me.

24 A Use my name.

25 Q That's why they have refused.

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1 A That explains it.

2 Q What was your title when you left?

3 A I was vice president in research, development  
4 and engineering.

5 Q What was your title when you began?

6 A I was a principal scientist in research and  
7 development.

8 Q Were there interim titles between those two?

9 A Oh, God, yes.

10 Q Please.

11 A Some of them are joint. It didn't go A-B-C.

12 Q They overlapped?

13 A Yes, some of them overlapped. So I was a  
14 principal scientist. And then I took the additional  
15 responsibility, I was manager of biochemical research.  
16 So I had both of those at the same time.

17 Q When was that that you became manager of  
18 biochemical research?

19 A I was a principal scientist for about a year  
20 and a half. So....

21 Q That's a big deal -- right? -- being a  
22 principal scientist.

23 A It was the highest technical position in the  
24 R and D organization, non-management position.

25 So a year and a half, I had that

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1 responsibility. And then in addition to that, I then  
2 became manager of biochemical research. So a year and a  
3 half -- let's start from '89. So a year and a half from  
4 '89 I was principal scientist. Then for another year  
5 and a half I was both principal scientist and manager of  
6 biochemical research.

7 Q Stop for a second. What is biochemical  
8 research?

9 A Biochemical research is a directorate within  
10 the research department. Research and development had  
11 one head, the big vice president. Then research had a  
12 vice president, and development had a vice president,  
13 and they both reported to the big vice president.

14 Within research, biochemical research was  
15 within the research arm, and that vice president of  
16 research had directors that reported to that vice  
17 president, and those directors had managers that  
18 reported to them. As a principal scientist, I reported  
19 directly to the vice president, not to the director.

20 When I became, in addition, manager of  
21 biochemical research, I reported both to the vice  
22 president and to the director.

23 Q What is biochemical research?  
24 A Biochemical research was a group of  
25 approximately fifty scientists in research that were  
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1 investigating a variety of biochemical and biological  
2 parameters associated with the product.  
3 Q Go on.  
4 A So we had a group of people trying to remove  
5 tobacco specific nitrosamines. We had a group doing  
6 Ames activity, Ames mutagenicity, as well as evaluating  
7 other biochemical tests. The thymidine kinase  
8 plus-minus mammalian mutagenicity tests was another.  
9 The Rand Rath P32 test was another.  
10 So there was a group of scientists that was --  
11 and this goes to a very early question you asked me  
12 about assays. So this was one of the components that I  
13 was involved in in terms of assay development and usage.  
14 There was a group that was headed that dealt  
15 with smoking behavior. It was a small group, and they  
16 did sensory work -- taste, smell -- and they did  
17 electroencephalographic work. And these would be with  
18 Philip Morris employees who were smokers. And Frank  
19 Golota was the head of that, and he reported to another  
20 scientist, a section leader.  
21 Q Just a second. I apologize for interrupting,  
22 but I don't really need that detail.  
23 The question I think was what is biochemical  
24 research?  
25 A Biochemical research, actually that was an  
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1 earlier question. And then I interpreted what you then  
2 said.  
3 Q What did you do?  
4 A What did you do.  
5 Q So you were telling me what you do.  
6 A Right.  
7 Q How about, rather than talk about specifics,  
8 let's just talk in general sort of jury terms. Were you  
9 trying to figure out how to take the bad stuff out of  
10 cigarettes so that they wouldn't hurt people?  
11 A That was part of it, yes.  
12 Q What was the other part?  
13 A It was to look at those things that were  
14 important for people smoking. That was the sensory  
15 aspect.  
16 Q Does that cover it? I appreciate that I've  
17 told you continue to talk technically now. So by sort  
18 of throwing it into those two big areas, are those the  
19 areas?  
20 A Yes, sir.  
21 MR. MAUNEY: Is there anything else that you  
22 need to say to complete your answer?  
23 MR. PIUZE: You being the guy who wanted to get  
24 back to Washington, D.C. in May.  
25 MR. MAUNEY: I would love it nothing more.  
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1 THE WITNESS: You guys are toying with my  
2 limited emotions here.  
3 I'm generally comfortable with my answer.  
4 Q BY MR. PIUZE: When you first went to work for  
5 Philip Morris, did you have an opinion, whether  
6 unformed, unfounded or otherwise, that tobacco smoke  
7 caused lung cancer?

8 A I have been asked this question I guess a bunch  
9 of times, and my answer then, my answer now is yes.  
10 Q What was your opinion?  
11 A That pretty much based on the epidemiology and  
12 the kind of chemicals that are found in smoke, it  
13 probably did cause lung cancer and other diseases.  
14 Q Did you watch Campbell testify before Congress?  
15 A No.  
16 Q Sometime shortly after he testified, you must  
17 have heard what he said.  
18 A Yes.  
19 Q How?  
20 A How did I hear?  
21 Q Yes.  
22 A I think I saw it on a news clip.  
23 Q That night?  
24 A I don't know. I was not very much in a  
25 position to be watching too many things at the time.

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1 Q Why?  
2 A I was in the hospital.  
3 Q With what?  
4 A I had major surgery.  
5 Q Well, I don't know where the line is between  
6 discovery and being polite, and I'm not too polite  
7 anyway, but what was wrong? What kind of surgery? If  
8 you don't want to tell me, you don't have to.  
9 A It was major, major surgery, yeah. Maybe off  
10 the record sometime.  
11 Q Forget it. If you don't want to tell me, you  
12 don't have to.  
13 When did you first go to work after Campbell  
14 testified?  
15 A I was on medical leave for at least a month.  
16 Q Do you recall what he said to Congress?  
17 A Only what I saw on the news clips. I remember  
18 seeing a bunch of these fellows including him raising  
19 his hand and swearing that whatever he was going to say  
20 was, as far as he was concerned, truthful.  
21 And I think there were the two questions. One  
22 had to do with nicotine and addictiveness I think, and  
23 the other had to do with smoking causing disease.  
24 Whether they were talking about lung cancer, I don't  
25 remember. And what I remember was that his answer dealt

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1 with the parameters set around it was that of scientific  
2 proof.  
3 Q I didn't understand your answer. Translate  
4 that English into different English.  
5 A Okay. It's pretty straightforward for me, but  
6 I'll try. Scientific proof would require the  
7 identification of, in addition to the epidemiology,  
8 okay, would require the identification of what it was in  
9 smoke that was doing whatever it was doing, whether it  
10 was lung cancer or heart disease, and the mechanism by  
11 which it was doing it.  
12 So you needed to have really three components.  
13 You needed to have, well, four if you were lucky, if you  
14 had animal models that supported it, but experimental  
15 models. You needed the epidemiology.  
16 Q That's number one?  
17 A That's number one. With the epidemiology, you  
18 needed to have whatever the causative agents or factors

19 were.  
20 Q Within the smoke?  
21 A Absolutely.  
22 Q That's number two?  
23 A Number two.  
24 The mechanism by which they did it, and then  
25 some experimental data that would support that. And

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1 this was spring of '94, April of '94 I think.  
2 Q Which were missing?  
3 A What was missing was they didn't know what it  
4 was in smoke and they didn't know the mechanism and the  
5 experimental models were not very good.  
6 Q What has changed?  
7 A Well, for me?  
8 Q No.  
9 A For the company?  
10 Q Yes.  
11 A What has changed for the company is the company  
12 has decided not to argue about what wasn't known and not  
13 to argue at all with the public health community on this  
14 and focus on what was known and what is known, which is  
15 the epidemiology.  
16 And the epidemiology for the public health  
17 community was strong enough and sufficient, and the  
18 company made a decision, not based on any new science,  
19 not based on any new science, that it was  
20 counterproductive to the company and a variety of its  
21 efforts to continue this line of argumentation. So they  
22 decided to stop it.  
23 Q Which efforts of the company was it  
24 counterproductive to?  
25 A The ones that I'm aware of that concerned me

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1 was that we had ended up marginalizing ourselves  
2 scientifically. Up until Joe Califano closed down the  
3 tobacco working group efforts at the National Cancer  
4 Institute -- so that would have been what? -- late '70s,  
5 early '80s, there was a lot of interaction going on  
6 between some of the tobacco company scientists and  
7 scientists in the public health community, National  
8 Science Institute.  
9 Q Califano had to be out by '80.  
10 A Okay. So it was '79 or '80.  
11 Q Give him a running start on that answer.  
12 A I said late '70s, early '80s. So I take your  
13 response. And with that, Mr. Califano basically said  
14 no, we end this but we're not going to have any of this  
15 cooperative stuff anymore. And things just went  
16 downhill from that point on.  
17 And people that we wanted to collaborate with  
18 and people that wanted to collaborate with us became  
19 more and more difficult, and our scientific position on  
20 this just made things worse. And so from my  
21 perspective, the changing of this position has started  
22 to change some things.  
23 Q The changing of this position, "this position"  
24 meaning what position?  
25 A The company's position that it agrees with the

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1 medical and scientific evidence that smoking causes lung  
2 cancer and other diseases.  
3 Q What has that started to change?

4           A     It has changed the nature of the interaction  
5 between Philip Morris RD and E with people like  
6 Drs. Burns and Benowitz and Dr. Connolly, the World  
7 Health Organization, the Institute of Medicine, Health  
8 Canada. We are becoming more and more engaged in terms  
9 of our activities in terms of harm reduction and trying  
10 to get beyond whatever the political issues are and just  
11 focus on the important scientific and public health  
12 issues.

13          Q     So of the four factors that you mentioned  
14 before that Philip Morris needed to see scientifically  
15 before accepting the fact that smoking caused lung  
16 cancer, on the day that Campbell got up and testified to  
17 Congress, only one of those factors had been  
18 established; correct?

19          A     That's right.

20          Q     And on the day you left Philip Morris in 1999,  
21 only one of those factors had been established?

22          A     No. Actually there was a change on the  
23 experimental side that first appeared in the scientific  
24 literature in about 1995, and that was the work from  
25 Dr. Hans Peter Witschi at the UC system in Riverside,

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1 California.

2           And he has subsequently published a series of  
3 papers that's been replicated by others and actually  
4 been replicated by us, Philip Morris, at the Institute  
5 showing that the inhalation of tobacco smoke, that in a  
6 certain animal model under very special conditions  
7 increases lung tumors in those animals.

8           And it wasn't simply that. The experimental  
9 work, it appears to be dose-related. That is, the more  
10 smoke, the more lung tumors that you get. And these  
11 lung tumors, some of them are adenocarcinomas. So they  
12 could be viewed as not just tumors in an animal, but a  
13 tumor similar to the one that a human smoker might get.

14          Q     Where was that published?

15          A     It's been published in five or six different  
16 toxicology journals. Some of it I think, I'm sure, is  
17 in my reliance documents.

18          Q     Are you saying -- I'm sorry. Are you saying  
19 five or six separate different publications?

20          A     Yes.

21          Q     Can you give me the names of just a couple?

22          A     Not without looking at my reliances.

23          Q     Are these obscure journals?

24          A     No. They're mainstream inhalation toxicology,  
25 cancer journals. In fact, the animal model that he's

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1 using created a subgroup meeting of scientists that work  
2 on this animal model in the United States, and they meet  
3 once a year. So I would say it's mainstream toxicology,  
4 mainstream inhalation tox.

5           And Dr. Witschi has been -- I think he's  
6 getting ready to retire, he's a physician -- one of the  
7 premier inhalation toxicologists in the country for  
8 decades.

9          Q     What animal model did he use? Costano class  
10 lawyers?

11          A     Well, do they breathe?

12          Q     Breed?

13          A     Breathe. Are they anaerobic? These are the AJ  
14 mouse.

15 Q If you get too anaerobic, you don't have enough  
16 energy to breathe.  
17 A You get your energy from another place. There  
18 are a whole bunch of animals and critters that are  
19 anaerobes that don't need oxygen.  
20 Q Mice?  
21 A These are mice. These are called the AJ mouse.  
22 It's part of a Strain A mouse.  
23 Q Mice is good enough for me.  
24 A Okay.  
25 Q In '95 this came to your attention?

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1 A Yes.  
2 Q In '95 did you pass this on to other people at  
3 Philip Morris?  
4 A Oh, yes.  
5 Q It was no secret?  
6 A No.  
7 Q Did you conspire to keep it secret from Bible?  
8 A From Mr. Bible?  
9 Q Yes.  
10 A I don't think so.  
11 Q Are you familiar with Bible's testimony in 1997  
12 and 1998 up in Minnesota?  
13 A No.  
14 Q Do you know who Bible was?  
15 A Oh, yes.  
16 Q Who?  
17 A He was up until --  
18 Q Last week?  
19 A The 25th of April, something like that, the  
20 CEO. I think he's still the chairman until August, but  
21 I think he stepped down as the CEO.  
22 Q He was the boss of bosses; right?  
23 A Yes.  
24 Q I used to be able to say that in Italian once.  
25 I got that from The Godfather. Anyway, on the day you

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1 left Philip Morris in 1999 -- what day was that?  
2 A February 1st was my retirement day.  
3 Q Two of the four criteria that would have been  
4 necessary for the company, in order to say  
5 scientifically there's a link between smoking and lung  
6 cancer, had been established as of February 1, 1999?  
7 A Well, the devil is always in the details.  
8 So here you had Dr. Witschi publishing his  
9 first paper in about '95. Then over subsequent years he  
10 published more papers, trying to clarify the system and  
11 showing that it appeared to be dose related.  
12 Then somebody else, an Italian group,  
13 replicated the study because replication by an  
14 independent person is always an important criteria.  
15 Then we got involved and we were able to replicate it.  
16 But here is to me the important distinguishing  
17 characteristic. When he did his studies, he did  
18 something very important. He separated the smoke into  
19 particle phase and gas phase. So the particle phase is  
20 where the tobacco specific nitrosamine, the  
21 benzo(a)pyrene, the major carcinogens that are found in  
22 smoking are found in the particle phase.  
23 He then administered the phases to the animals.  
24 And what he found was the gas phase was where the tumor  
25 activity was. And then he measured tobacco specific

1 nitrosamines and benzo(a)pyrene in the gas phase of the  
2 smoke.

3 And his conclusion, and I pretty much remember  
4 this because I was fully awake at the time, was that  
5 these couldn't possibly be responsible for the lung  
6 tumor genicity because they really weren't. They were  
7 there in such minuscule amounts that it was a heretofore  
8 unidentified compound in the gas phase. Okay.

9 So as far as I'm concerned, this was a seminal  
10 piece of work. And it pretty much, if it turns out to  
11 be relevant to the human smoker, if it turns out to be,  
12 it will turn the last fifty years of tobacco smoke  
13 carcinogenicity on its head because everybody has been  
14 focusing on the tar, you know. When Winder painted the  
15 backs of mice with tar after his epi-study, he said,  
16 "Boys, it's the tar. We have to lower this tar."

17 Q But didn't some of the scientists hired by  
18 Philip Morris know the real truth, and rather than  
19 concentrate on tar, they were just blowing smoke; right?

20 MR. MAUNEY: Object.

21 THE WITNESS: Was that just an insult or a  
22 question?

23 Q BY MR. PIUZE: It was neither. It was just  
24 something that's out there.

25 A I don't know. I haven't run into any of those.

1 Q That could be smoke in itself. On the other  
2 hand, if it falls on you, it could be particulate.

3 A Putting that aside, I don't know of any  
4 scientists at Philip Morris that knew anything that  
5 anybody else knew or didn't know.

6 All I'm telling you is that Professor Witschi's  
7 work, if it turns out to be relevant to humans, really  
8 turns everything on its head because the focus for fifty  
9 years has been tar and it's been on specific compounds.  
10 And now he's saying it's not tar. And I don't know what  
11 it is, but I can tell you in my side it's not  
12 benzo(a)pyrene and it's not tobacco specific  
13 nitrosamines.

14 So when we talk about the four buckets:  
15 epidemiology, what it is, the mechanism and the  
16 experimental, and you say, well, the experimental is now  
17 addressed, I would say there is an experimental  
18 component that shows tobacco smoke causes lung tumors.

19 But when you look, when you dig in, don't just  
20 look at the outside, the tip of the iceberg. When you  
21 peel that away and look in, things are very, very  
22 complicated. And they're complicated to the point that  
23 it doesn't help with answering your question. But your  
24 question is an important question from what we do with  
25 this information.

1 Q It's an important question to me too, which is  
2 why I want to soldier on get you to answer it, and the  
3 question is something like this: On the day you left  
4 Philip Morris on February 1st, 1999, were two of the  
5 four questions that Philip Morris needed answered in  
6 order to say scientifically tobacco smoke causes lung  
7 cancer answered at that point?

8 A No. Epidemiology, absolutely. The  
9 experimental made a big step in that direction, but it  
10 raised a whole series of new questions.

11 Q That's a no?  
12 A You know, it's not a question that I could  
13 honestly give you a yes on. I can give a yes or no on  
14 the epidemiology. I can give you a yes or no on the  
15 smoking constituents, the mechanism. I can tell you  
16 yes, there's an experimental model.  
17 Q Well, stop, stop, stop. We can do this much  
18 easier. These guys want to go home.  
19 When you went to work -- forget went to work.  
20 On the morning -- what's that guy, Campbell? Do you  
21 know Elmer Low?  
22 A I know Elmer Low, yes.  
23 Q On the day that Campbell testified before  
24 Congress, that morning before he testified before  
25 Congress, down at Philip Morris, as far as the  
76  
1 scientists in your division were concerned, on the issue  
2 of epidemiology, that was a yes, epidemiology taken  
3 alone shows there's a link between tobacco smoke and  
4 lung cancer; right?  
5 A Yes, sir.  
6 Q And when you left on February 1st, 1999, that  
7 was still true obviously?  
8 A Yes.  
9 Q On the morning that Campbell testified, what's  
10 the next issue -- you can either say them alphabetically  
11 or in order of importance -- but what would be the next  
12 issue of the four?  
13 MR. MAUNEY: Objection; vague.  
14 THE WITNESS: I'm not sure you mean. The  
15 epidemiology still hadn't changed.  
16 Q BY MR. PIUZE: What was the next thing? You  
17 listed four things?  
18 A We didn't know what it was.  
19 Q Let's stay there. On the day that Campbell  
20 testified before Congress that morning, you scientists  
21 down at Philip Morris did not know the constituents in  
22 tobacco smoke that caused, supposedly caused lung  
23 cancer; correct?  
24 A Right.  
25 Q On the day you retired February 1st, 1999, that  
77  
1 was still the case?  
2 A Yes, sir.  
3 Q On the morning that Campbell testified before  
4 Congress, you scientists at Philip Morris did not know  
5 the mechanism of whatever constituents there might have  
6 been that caused lung cancer from tobacco smoke if in  
7 fact that was the case; right?  
8 A That's true.  
9 Q And on the day you retired on February 1st,  
10 1999, that was still true?  
11 A That's correct.  
12 Q If there was a constituent, you didn't know  
13 what the mechanism would be that would cause lung  
14 cancer; right?  
15 A That's correct.  
16 Q Then the fourth thing had to do with animal  
17 models; right?  
18 A Correct.  
19 Q On the morning that Campbell testified before  
20 Congress, the scientists down at Philip Morris didn't  
21 have an animal model with which to demonstrate that



22 tobacco smoke caused lung cancer; correct?  
23 A Correct.  
24 Q And on the day you left in February 1st, 1999,  
25 was it murky? You can't say whether that was still  
78  
1 correct or incorrect?  
2 A I would say it was more correct than incorrect.  
3 Q So your answer demonstrates that it was still a  
4 murky issue?  
5 A Yes. Still is.  
6 Q Excellent. That's all I wanted from you.  
7 Okay.  
8 Now, did you ever, while you were at Philip  
9 Morris, go to a superior as far as flow charts are  
10 concerned, organizational charts are concerned, and say,  
11 I believe that tobacco smoke causes lung cancer? As a  
12 scientist, I believe tobacco smoke causes lung cancer?  
13 A I don't know if I would -- I never said  
14 anything specifically like that. But I can tell you  
15 that in terms of my interactions with my superior, that  
16 was the operational assumption we were making, that it  
17 did. And we were trying to figure out what it was that  
18 was doing it to either get rid of it or lower it.  
19 Q Who was your superior?  
20 A Dr. Jim Charles. He was the vice president of  
21 research.  
22 Q When was he your superior?  
23 A From when I got there to when I left  
24 biochemical research.  
25 Q Which was?  
79  
1 A In '92 or '93.  
2 Q So now let's go back to your brief history of  
3 time at Philip Morris. First year and a half, principal  
4 scientist?  
5 A Right.  
6 Q Then there was an overlap. And up until 1992  
7 approximately you were the what? Vice president?  
8 Manager? What?  
9 A I was manager of biochemical research and a  
10 principal scientist.  
11 Q That ended when?  
12 A '93, something like that.  
13 Q So, now, four years of your career have been  
14 accounted for thus far?  
15 A That's correct.  
16 Q And when you were the manager on that  
17 organizational chart, who was the vice president to whom  
18 you reported directly above you?  
19 A Well, there was a director.  
20 Q Excuse me. I apologize. Who was the director?  
21 A Dr. Kathy Ellis.  
22 Q With your other hat on as principal scientist,  
23 you went around Kathy Ellis and reported to whom?  
24 A Dr. Jim Charles. And she reported to Jim as  
25 well.  
80  
1 Q After four years, what was the next title or  
2 group of titles you held?  
3 A I then became a director of an organization  
4 called scientific affairs within research and  
5 development.  
6 Q You had not been a director before or you had

7 been a director before?

8 A No. This is a strictly management position,  
9 whereas before I had a management hat and a technical  
10 hat.

11 Q And what were you managing now?

12 A I had a group of individuals in Richmond and  
13 scientists, and scientists in Neuchatel, Switzerland.  
14 And I had as part of my responsibilities some of the  
15 scientific activities that I was responsible for at the  
16 Institute in Europe.

17 Q What were you doing? What was your group  
18 doing?

19 A I was becoming at this point the individual in  
20 the organization responsible for smoking and health  
21 activities. Rather than it being a non-localized group,  
22 it was now being localized. And my initial  
23 responsibilities dealt with environmental tobacco smoke.  
24 But over the brief course of time, it started to embrace  
25 all aspects of smoking and health questions.

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1 Q Environmental tobacco smoke is another term for  
2 secondhand smoke?

3 A Yes.

4 Q How long were you principally involved with  
5 respect to most of your time on secondhand smoke?

6 A For a couple of years. I mean principally,  
7 okay, a couple of years up through the Federal OSHA  
8 hearings in Washington, which I spent about six months  
9 up in Washington, D.C. involved in making technical  
10 submissions to the federal government on behalf of  
11 Philip Morris.

12 Q Who said secondhand smoke was bad at that time?

13 A Well, the United States Environmental  
14 Protection Agency in the United States was probably  
15 about that time the principal vocal entity for that.  
16 They had done a risk assessment in late '91 or early  
17 '92.

18 Q Were you principally involved in secondhand  
19 smoke in order to respond to the government?

20 A More than, well, I was in Washington  
21 principally to respond to the government. But that was  
22 not the extent of my involvement for the company  
23 regarding environmental tobacco smoke.

24 Q Nor did I mean to imply that. Prior to the  
25 time -- when did the EPA do what it did?

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1 A End of '91, beginning of '92.

2 Q Just before that occurred, was there someone at  
3 Philip Morris who was principally involved in  
4 environmental tobacco smoke?

5 A Yes.

6 Q Who was that?

7 A Dr. Bob Pages.

8 Q Spelling?

9 A P-A-G-E-S.

10 Q And why did you replace that person directly?

11 A He came to work for me.

12 Q So what happened was that the issue got  
13 transferred to someone of higher rank? Is that a way of  
14 saying it?

15 A No, I don't think so. Bob worked for Tom  
16 Osdene, and Tom was getting ready to retire. And I  
17 think at that point he was a vice president in Philip

18 Morris, not in R and D.  
19 And the head of R and D and the head of  
20 research wanted to move that activity within R and D.  
21 And it was decided that that activity would be subsumed  
22 within my organization. And so Tom retired, and Bob and  
23 some of the people working with Bob came over to  
24 scientific affairs.

25 Q Does all that mean that at one point Osdene was  
83

1 the boss of environmental smoke?

2 A Yes, sir.

3 Q When's the last time you saw Dr. Osdene?

4 A Saw him?

5 Q Yes.

6 A Several years ago.

7 Q Why did you say that?

8 A I've spoken to him, not seen him. I've spoken  
9 to him on the phone.

10 Q Where is he?

11 A In [DELETED].

12 Q When's the last time you worked on the  
13 secondhand smoke issue? Last week?

14 A That was part of the Department of Justice  
15 deposition touched on environmental tobacco smoke.

16 Q Can you give me in brief form your opinions on  
17 environmental tobacco smoke?

18 A With regard to?

19 Q Is it harmful?

20 A I believe that the scientific evidence is  
21 sufficient to say that exposure to environmental tobacco  
22 smoke in a certain subset of asthmatics can trigger  
23 and/or exacerbate asthmatic attacks. I believe that  
24 environmental tobacco smoke can be highly irritating,  
25 unlike you or I: runny eyes, runny nose kinds of

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1 things. I believe that --

2 Q Tobacco smoke can be highly irritating unlike  
3 you and I. I was going to say speak for yourself.

4 A But you didn't.

5 Q I didn't.

6 A When it comes to certain things with children,  
7 it's a little bit more difficult because I don't know  
8 how to separate pregnant women smoking during pregnancy  
9 from environmental tobacco smoke. And so it may be more  
10 related, causatively related to smoking by the mother  
11 during pregnancy than to exposure to environmental  
12 tobacco smoke.

13 And there are a bunch of disorders, diseases,  
14 pathologies if you will, that I think are causally  
15 related to tobacco smoke. But I can't say at this point  
16 that it's ETS or active smoking.

17 Q So this subset of asthmatics, how many people  
18 are in that subset that you have?

19 A It's a small subset. And these are actually,  
20 these were studies that we actually helped support.  
21 These are people that claim to be smoke-sensitive,  
22 tobacco smoke-sensitive.

23 And when you study these people under highly  
24 controlled conditions, a small subset of those you can  
25 actually demonstrate triggering or exacerbation of

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1 asthmatic symptoms, if not outright attacks.

2 Q How many?

3 A There are -- how many asthmatics do they  
4 estimate are in the United States? Ten plus million  
5 people. So there might be at least a million people.  
6 And I could be in gross error of my estimate.  
7 Q How many people live in the United States?  
8 A 280 million.  
9 Q Putting side --  
10 A Legally.  
11 Q Putting aside those one million roughly,  
12 appreciating it's just a rough estimate, of the 279  
13 million remaining Americans, what are your feelings  
14 about whether secondhand smoke is harmful?  
15 A Again, with small children in which you're  
16 talking about things like otitis media or sudden infant  
17 death syndrome, I can't tell you it's -- tobacco,  
18 there's a tobacco smoke component that's causative, but  
19 I can't tell you whether it's environmental tobacco  
20 smoke or it's that the woman smoked while she was  
21 pregnant. But there is a tobacco smoke component.  
22 Q What's otitis media?  
23 A Middle ear infection. And so this would affect  
24 infants generally prior to the age of two.  
25 Now, there's also some association with

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1 environmental tobacco smoke and respiratory diseases,  
2 infections. And whereas I'm not quite through finishing  
3 my evaluation, but there clearly is something, some  
4 component there, I'm not exactly sure what that is.  
5 But actually some of the people who have  
6 reviewed this are also not clear, which I think is why  
7 myself and some of the other scientists that are in the  
8 company now as well as the company itself recommend not  
9 to smoke around little kids.  
10 Q Neither of those -- I guess SIDS is life  
11 threatening obviously. It's death.  
12 A That's right.  
13 Q How many SIDS deaths are there per year in the  
14 United States?  
15 A I don't know. It's taken -- well, there are a  
16 couple of problems. One, when the pediatric society  
17 made its recommendation about sleeping position and  
18 clothing, the number of deaths related to SIDS dropped  
19 by 80 or 90 percent. Then the original description of  
20 SIDS turned out to be further complicated by what was  
21 infanticide, that somehow people, parents were killing  
22 their kids and blaming it on SIDS.  
23 There is no medical diagnosis for SIDS. I  
24 believe the state of California, some bodies within the  
25 state that have tried, maybe they've succeeded with

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1 setting up criteria that would involve an autopsy  
2 because there is some things in the brain that seem to  
3 be changed by this. And at a recent pediatrics meeting,  
4 I don't know where it was held, there were further  
5 deliberations on this.  
6 But even if it's a small number of children,  
7 it's still a pretty powerful, emotive kind of thing,  
8 losing a young baby.  
9 Q Why don't you just give me, if you can, an  
10 estimate, a range of how many SIDS deaths there are per  
11 year.  
12 MR. MAUNEY: Calls for speculation. Object.  
13 THE WITNESS: I don't feel -- I've given you

14 one on asthma. I feel much less comfortable doing that  
15 with SIDS.

16 Q BY MR. PIUZE: Right now I'm not looking for  
17 your opinion. Right now I'm just looking for what's  
18 been reported.

19 A I don't know as I sit here today.

20 Q However many SIDS deaths there are per year,  
21 real SIDS deaths, not where the parents beat the hell of  
22 the little kid when no one's looking and blame it on an  
23 unseen hand, of the real SIDS deaths, has anyone ever  
24 put a percentage on those as being tobacco related?

25 A Yeah, I have seen some estimates of that. Once  
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1 you remove the sleeping position and clothing, which  
2 takes care of 70 to 90 percent, the residual 10 to 30  
3 percent that's left, some significant percentage of that  
4 people have attributed to tobacco smoke.

5 Q What would that significant percentage be?

6 A 30 to 50 percent of that or more.

7 Q But you can't give me any numbers though?

8 A I can't.

9 Q It doesn't translate to you into 3 kids a year,  
10 300 kids a year, 3,000 kids a year?

11 A Not in the absence of clinical criteria for  
12 diagnosis, no.

13 Q Otitis media does not kill people, does it?

14 A Not that I'm aware of.

15 Q Unless they get really crummy medical  
16 attention; right?

17 A No answer.

18 Q So now we've talked, you've mentioned -- and  
19 I'm trying to be a lawyer and put these in a box so that  
20 I can chop up your testimony into digestible pieces.  
21 We've put aside the asthmatics. We've put aside or I'm  
22 putting aside the otitis media victims, and we've talked  
23 a little about the SIDS people.

24 Aside from that, what are your views on whether  
25 or not secondhand smoke is harmful to health?

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1 A Didn't talk about lower and upper respiratory  
2 infections, of which that impacts millions of kids on a  
3 yearly basis. But when it comes to lung cancer and  
4 cardiovascular disease, I don't believe that ETS is  
5 causative.

6 Q Have you done anything about that? Have you  
7 done anything scientifically to prove or disprove it?

8 A Well, we have a study, lifetime animal studies  
9 in rats by inhalation of environmental tobacco smoke  
10 with actually a positive control, and we've been  
11 presenting and publishing data on those studies now for  
12 several years. The study was started by me,  
13 scientifically started by me in 1992.

14 And though most of the histopathology is done,  
15 there's a little bit more. But the main elements of the  
16 study are really done.

17 Q Has that been published?

18 A It's still being published.

19 Q Still being published?

20 A Still being established.

21 Q What do you mean by that?

22 A We're talking about the largest and most  
23 comprehensive study of its kind that I'm aware of that's  
24 ever been mounted to evaluate tobacco smoke and lung

25 tumors and lung cancer. And it's the largest study that  
90  
1 INBIFO, our Institute, has ever carried out.  
2 Q You don't like the way that sounds, do you? Do  
3 I have that right? Don't I remember you saying that?  
4 A Right. That's the first time I've used that in  
5 the deposition.  
6 Q You thought I was sleeping too.  
7 A No. I never thought you were sleeping. It's  
8 me that I'm worried about.  
9 Q You can blame it on me.  
10 MR. MAUNEY: Do you need a break, Dr. Carchman?  
11 THE WITNESS: For the moment I'm fine.  
12 Q BY MR. PIUZE: So let's say we're in this room  
13 here. There are no levels of secondhand smoke here?  
14 A I have no idea. I mean, has this room always  
15 been a no smoking room?  
16 Q Yes.  
17 A Has this building always been a nonsmoking  
18 building?  
19 Q No.  
20 A Then I couldn't answer your question about  
21 whether there would be any tobacco smoke constituents in  
22 this room.  
23 Q Why?  
24 A Well, do you smoke?  
25 Q No.

91  
1 A Well, not knowing the smoking habits of anybody  
2 else in this room, if you smoke, the nicotine you smoke  
3 will be absorbed through your clothes, and wherever you  
4 go, you'll be perpetually off-gassing that nicotine.  
5 So given the sensitivity methodologies, without  
6 anybody ever having smoked in this office or even in  
7 this building, if the reporter went out to have smoked  
8 and come in, I could measure or somebody could measure  
9 nicotine and yet nobody would have ever smoked in here.  
10 Q What if we were in a restaurant in Richmond?  
11 Can you smoke in restaurants in Richmond?  
12 A Some. Some you can't  
13 Q How is that determined, which you can and which  
14 you can't?  
15 A I guess it's determined by the restaurant and  
16 the customers.  
17 Q No law? Just what the owner wants to do?  
18 A I think so.  
19 Q Let's say we're in a restaurant in Richmond  
20 where you can smoke. Can you tell me what the levels of  
21 secondhand smoke are there?  
22 A Not without knowing how many people, the  
23 engineering features of the room, the ventilation, the  
24 ventilation system. I couldn't give you any numbers,  
25 any objective numbers.

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1 Q What about averages for public buildings in  
2 places where smoking is allowed? Can you give me  
3 numbers for secondhand smoke?  
4 A There are published reports, some of which,  
5 some of these reports and publications we ourselves,  
6 Philip Morris, have helped sponsor and we ourselves have  
7 actually carried out some measurements.  
8 There are, depending on the time, that is, the  
9 year, it appears that if one looks historically, just

10 focusing on the United States, at levels of ETS  
11 reported, they've been going down. And the  
12 contributions to that involve smoking restrictions,  
13 smoking bans, changes in ventilation and patterns of  
14 use, within what facilities it can be done.  
15 And if you look at, let's say, OSHA, federal  
16 OSHA had some workshops, and those kinds of numbers were  
17 published in the Journal of Environment Health  
18 Perspectives, which is the Journal of the National  
19 Institutes of Environmental Health Sciences, which is a  
20 federal government institute.  
21 And Dr. Katherine Hammond out here in  
22 California has also published some measurements. We  
23 have done both area measurements, personal monitoring,  
24 personal monitoring measurements, and we actually sent  
25 some scientists out here to talk with Cal/OEHHA and

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1 Cal/EPA on those measurements.  
2 And depending upon the kind of building you're  
3 talking about or facility you're talking about, the  
4 numbers range from nonmeasurable to where you can  
5 attribute particulate matter to smoke, say, in a bar  
6 that allows -- certain bars that allow smoking or in  
7 certain homes in which smoking takes place, those  
8 numbers can be high.  
9 But in general the mean or median value has  
10 been decreasing over time.  
11 Q Still waiting for numbers. Let's talk about  
12 the bars or the houses where smoking is heavy. What are  
13 the numbers that can be high?  
14 A I think that's easily available looking in the  
15 articles. I don't remember them off the top of my head.  
16 Q Looking at what articles?  
17 A The Environment Health Perspectives, the OSHA,  
18 the three OSHA workshops. Two of them had materials on  
19 there on measurements, ETS measurements and the number  
20 of different venues from different places around the  
21 world.  
22 We sponsored what turned out to be the largest  
23 study of its kind, 16 cities within the United States,  
24 in which we did measurements in workplaces. And then  
25 following some suggestions from OSHA and some of the

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1 other members of the committee, we looked at restaurants  
2 and bars as well.  
3 And all of that, it's an enormous body of  
4 information that's been published on that. I can't give  
5 you the precise objective numbers, but they're all  
6 available in the peer-reviewed literature.  
7 Q Humor me a bit. How about a range of numbers  
8 without giving me a precise number?  
9 MR. MAUNEY: Objection; calls for speculation.  
10 He said he didn't know.  
11 THE WITNESS: Simply giving you a range I think  
12 is going to be misleading from the perspective that if  
13 you look at the median values, the question, the more  
14 important question I think becomes in the distribution,  
15 the actual distribution of these ranges.  
16 So in other words, are 80 percent of the  
17 facilities you've measured at the mean or less or 90  
18 percent, or are your highest levels of ETS really only  
19 found in 5 percent of the facilities? Those numbers are  
20 part of this.

21 And when you talk, when you ask somebody like  
22 me, well, tell me what the range is, it's complicated  
23 enough. And it's been awhile since I looked at it.  
24 Q BY MR. PIUZE: Is it a stupid question?  
25 A No, no. I don't think you should beat yourself

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1 any more than you normally do. But you need to know not  
2 just what it is but what's the distribution within  
3 spaces in the restaurants you've looked at.

4 Q Okay. I give up.

5 A Sorry. I didn't mean for you to give up.

6 Q It was a stupid question.

7 A No, no.

8 Q We'll never do it again.

9 A Maybe it was my answer.

10 Q Did you also measure places, instead of bars  
11 and places in 16 cities in the United States, what about  
12 in Europe? Did you measure places there?

13 A Yes.

14 Q Like what?

15 A There were a series of European studies that  
16 were modeled on the 16-city study in the United States,  
17 and they were done in a dozen-plus cities around Europe  
18 and Asia.

19 Q France?

20 A Could be.

21 Q Germany?

22 A Germany. I think there may have been more than  
23 one city in Germany. Switzerland, England.

24 Q Where in Asia?

25 A In Australia and in Hong Kong at least and

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1 maybe, at least there may have been one other place,  
2 maybe someplace in Malaysia.

3 Q Is it a true statement that, putting aside the  
4 asthmatics and the inner ear disturbances and the SIDS,  
5 you've never, you corporately have never found a place  
6 in any city, in any bar, in any venue where, when you go  
7 into that place and breathe in the air, no matter how  
8 thick the tobacco smoke is in that room, you've never  
9 found anyplace where that tobacco smoke is going to be  
10 harmful for other people besides those subgroups that  
11 you just mentioned?

12 A I don't know if the question has ever been  
13 posed quite that way. I think the question generally  
14 was one of looking at the whole picture and then seeing  
15 what the distribution was over that and then trying to  
16 deal with somehow lowering it.

17 The issue of is there a level of ETS exposure  
18 that could be harmful in addition to the things I talked  
19 about? And it could be. I don't know what that would  
20 be.

21 Q But that wasn't my question though. You just  
22 reframed my question, and if you could answer my  
23 question, I'd appreciate it.

24 MR. MAUNEY: Do you need to hear the question  
25 again?

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1 (The record was read as follows:

2 "Q Is it a true statement that,  
3 putting aside the asthmatics and the  
4 inner ear disturbances and the SIDS,  
5 you've never, you corporately have never



6 found a place in any city, in any bar,  
7 in any venue where, when you go into  
8 that place and breathe in the air, no  
9 matter how thick the tobacco smoke is in  
10 that room, you've never found anyplace  
11 where that tobacco smoke is going to be  
12 harmful for other people besides those  
13 subgroups that you just mentioned?")  
14 THE WITNESS: I don't know about what  
15 "corporately" means. All I can talk to is the  
16 scientists, and I don't think we've ever asked the  
17 question that way.  
18 Q BY MR. PIUZE: Okay, but I just did. So what's  
19 the answer?  
20 A I can't answer it corporately. I can only  
21 answer it for me.  
22 Q Okay.  
23 A I would think that there probably is some  
24 circumstance somewhere in the world under some exposure  
25 condition in which exposure to ETS could be harmful in

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1 addition to the things I've talked about.  
2 Q But you haven't found that place yet?  
3 A It's not simply a question of finding the  
4 place. It's understanding enough about it to be able to  
5 say yes, these are the conditions that would produce  
6 whatever it is you would be interested in.  
7 Q So be it. You haven't found that place yet?  
8 A I'm not aware of it.  
9 Q So if this portion of your deposition, as an  
10 example, is going to be read to a jury, if they are  
11 non-asthmatics -- and obviously they're not children,  
12 they couldn't be on the jury. So we don't have to worry  
13 about inner ear disturbances or SIDS.  
14 If they're non-asthmatics, in your view they  
15 don't have to worry about any risk of cardiovascular  
16 problems, lung cancer problems or pulmonary problems  
17 from breathing in the air in any bar or theater or  
18 restaurant or pool hall that they might go to?  
19 A No, I didn't say that. And you actually left  
20 out probably the most common effect associated with ETS  
21 exposure, and that's irritation.  
22 And the question then becomes what are the  
23 consequences of chronic irritation where -- see,  
24 irritation is a reflection of the body's response to  
25 something that it doesn't want to be around. So when

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1 your eyes start to run and your nose starts to run and  
2 your throat starts to scratch and you start coughing,  
3 it's basically saying there are things here that are  
4 irritating to you and you need to somehow get out of  
5 there or avoid that place.  
6 The consequences of chronic irritation I think  
7 pose some potential long-term health consequences for  
8 people that find themselves in that situation. And the  
9 consequences could include a whole series of what I  
10 would call serious medical problems up to and including  
11 lung disease.  
12 I'm not aware, and a few people have looked at  
13 ETS exposure and emphysema, chronic bronchitis, and the  
14 data, even data even as reviewed by cognizant bodies  
15 remains inconclusive.  
16 But I couldn't say, having sworn, that I don't

17 believe that under any circumstance, especially if it's  
18 high, long-term exposure, that you wouldn't have some  
19 important medical problem in addition to the ones we've  
20 talked about. Can I tell you what they are under what  
21 conditions? Not at this point.

22 Q Let's hear about any circumstance that -- you  
23 can't tell me --

24 A No, no.

25 Q -- that, under no circumstances. So which

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1 circumstances are you reserving so that you can't tell  
2 me?

3 A No.

4 Q That someone is going to live their entire life  
5 in a bar?

6 A No. You've parsed it out differently than my  
7 answer. I can't tell you what they are doesn't mean I  
8 can tell you the corollary of that. I just don't have  
9 enough information to answer your question other than  
10 the way I've done it, that I think that under certain  
11 situations, there could be long-term health problems for  
12 certain individuals.

13 What those problems would be, I think pulmonary  
14 would be a reasonable guess. What are the further  
15 long-term, whenever you have long-term pulmonary  
16 problems, you inevitably draw in cardiovascular problems  
17 as well.

18 Q Pulmonary, meaning bronchitis?

19 A For example, for example.

20 Q Cardiovascular, meaning what cardiovascular  
21 problems that you're pulling in are what?

22 A In other words, when you have chronic pulmonary  
23 problems, you end up putting additional excessive stress  
24 on the cardiovascular system.

25 Q I understand that. So what would you then

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1 expect to find in the way of disease?

2 A In terms of cardiopulmonary issues where you  
3 might have pulmonary hypertension or some other form of  
4 hypertension might be a consequence of that. And we're  
5 only talking about people who may be otherwise healthy.

6 If you have somebody who has some sort of  
7 medically compromised situation, it could make things  
8 worse.

9 Q In Japan, in those Marlboros in Japan, what do  
10 those Marlboros get filtered through?

11 A Are we still talking environmental tobacco  
12 smoke?

13 Q No.

14 A We're talking about filters?

15 Q Yes. How are the filters comprised in Japanese  
16 Marlboros?

17 A It's primarily a charcoal filter market.

18 Q Is that because the government says so?

19 A No. Because the marketplace says so.

20 Q Have you ever tested those charcoal filters in  
21 Japan, the Marlboros, against whatever kind of filters  
22 -- what do we have? Acetate?

23 A We have a number of different kinds of filters.

24 Q On Marlboros?

25 A Oh. You're strictly talking about --

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1 Q Marlboro.

2 A Yes.  
3 MR. MAUNEY: Could I hear the question again.  
4 Q BY MR. PIUZE: Charcoal filtered Marlboro  
5 cigarettes manufactured in Japan tested against acetate  
6 filtered cigarettes, Marlboros, manufactured in the  
7 United States, have you ever done that?  
8 MR. MAUNEY: Objection; vague.  
9 THE WITNESS: Not yet.  
10 Q BY MR. PIUZE: How come?  
11 A Why?  
12 Q Why not?  
13 A Why not? We, in our what I call the brand  
14 study, we have a charcoal filter cigarette in there that  
15 we've looked at. And it behaves as you would expect  
16 charcoal filter cigarettes to behave in terms of gas  
17 phase components.  
18 Q What's a brand study? What does that mean?  
19 A That's the Philip Morris brand study in which  
20 we have investigated nine commercial Philip Morris  
21 brands in the United States, and one of those brands is  
22 a charcoal filter cigarette. And that's in my reliance  
23 documents.  
24 Q Which?  
25 A I don't remember off the top of my head.

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1 Parliament. I think it was a Parliament.  
2 Q Are they sold now?  
3 A Say again?  
4 Q Are they sold now?  
5 A I think so.  
6 Q With charcoal filters?  
7 A I think so.  
8 Q What have you studied?  
9 A In the brand study?  
10 Q Yes, to see what's the bottom line?  
11 A First we smoked these cigarettes under FTC in  
12 Massachusetts conditions. Next we did measurements of  
13 50 to 60 smoke constituent, particle and gas phase  
14 constituents. We then did Ames mutagenicity in those  
15 cigarettes under all of those conditions and we did  
16 mammalian cell cytotoxicity under those conditions.  
17 We also did the 1R4F, the 1R5F, the Canadian  
18 reference cigarette and our electrically heated  
19 cigarette in the United States. We currently have going  
20 on a similar study including mammalian mutagenicity  
21 studies.  
22 The bottom line is that pretty much cigarette  
23 tar is cigarette tar; that in terms of mutagenicity and  
24 cytotoxicity amongst the Philip Morris brands tested,  
25 consistent with two publications by Reynolds, tar is tar

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1 and the reference cigarettes are pretty much  
2 indistinguishable from their commercial tar delivery  
3 sectors.  
4 Of no surprise was that the Canadian reference  
5 cigarette had lower mutagenicity but higher cytotoxicity  
6 than the American blended cigarettes. That was no  
7 surprise. Of surprise, bottom line surprise, was that  
8 under the Massachusetts exaggerated smoking conditions,  
9 the specific mutagenicity went down -- we only have some  
10 speculation -- compared to FTC.  
11 So though you get more delivery of things by  
12 blocking vents and taking bigger puffs, when you

13 actually look at the specific mutagenicity or specific  
14 cytotoxicity, for whatever reason or reasons, those  
15 activities go down.

16 In terms of on a per cigarette basis -- and I  
17 think we went from a one milligram Merit Ultima  
18 conventional cigarette up to, I'm sorry, a non-filtered  
19 basic, but Marlboro Red was in there -- there was a  
20 linear relationship between tar and activity.

21 And when you just normalized for tar or for gas  
22 phase, at least for those nine products, the tar was tar  
23 and the gas phase was gas phase except for the charcoal  
24 filtered cigarette, which had lowered gas phase  
25 activity, which, if you look at the smoke chemistry, you

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1 can pretty much attribute to acrolein and formaldehyde.

2 So that's the bottom line so far.

3 Q Why?

4 A Why what? Why?

5 Q Why can you attribute it to acrolein and  
6 formaldehyde?

7 A We and others have done a lot on the  
8 cytotoxicity, of what it is in smoke that's doing it.  
9 And pretty much acrolein and formaldehyde are  
10 responsible for 60 to 80 percent of the cytotoxicity  
11 that we find in smoke.

12 Q What's the Japanese adult smoking rate?

13 A I used -- if by rate you mean the number of  
14 people that smoke, it's higher than in the United  
15 States.

16 Q What about the lung cancer rate?

17 A Actually, there was a new paper published by  
18 one of the universities, I think one of the ministries  
19 of health. It's starting to look a lot like the rest of  
20 the world. It's coming up.

21 Q What is it?

22 A It's less than African-Americans in the United  
23 States and it's less than Caucasians but higher than  
24 Hispanics, higher than other Orientals not of Japanese  
25 descent. And depending upon the Native American

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1 population, much higher than that. It's in the middle.

2 Q I didn't hear the last word.

3 A In the middle. So if African-Americans have  
4 the highest with about 115 lung cancer deaths or  
5 incidents per 100,000, the Japanese are in the 40 to 50  
6 per 100,000 range. And Caucasians are generally around  
7 70, 75 per 100,000.

8 Q I actually wasn't expecting to go here, but as  
9 long as we're here, why don't you give me the rates per  
10 100,000 with the other subgroups. You mentioned  
11 Hispanics, American Indians.

12 A Some of the Native American populations are  
13 just incredibly low, almost there with nonsmokers in the  
14 United States. I can't tell you why some of them are  
15 higher, but some of them, even with a high smoking  
16 prevalence and high usage of cigarettes, is still very,  
17 very low.

18 Q Hispanics?

19 A They're generally lower, less than 50 per  
20 100,000. I can't remember the specific.

21 Q Are these numbers for smokers then?

22 A No.

23 Q It's for the population?

24 A For the population, yes. This is from the Seer  
25 database.

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1 Q Do you remember what you were talking about  
2 before you digressed?

3 A Well, I didn't think I was digressing. I was  
4 trying very hard to keep my answer short and to be  
5 responsive to your question.

6 MR. MAUNEY: I'm wondering, we've been going  
7 for quite some time, if you need a break, if we need to  
8 break for lunch.

9 MR. PIUZE: I don't need a break. I don't eat  
10 lunch usually. And we probably will be done relatively  
11 soon. But maybe you should direct your question first  
12 at the court reporter.

13 MR. MAUNEY: Part of the question was to you,  
14 part of the question was to you. Do you need a break,  
15 Dr. Carchman?

16 THE WITNESS: I wouldn't mind getting some more  
17 water.

18 (Whereupon, a recess was taken.)

19 Q BY MR. PIUZE: In 1994 approximately you  
20 changed your position so that you became the director  
21 of?

22 A Scientific affairs.

23 Q Until when?

24 A I became then the director. The title didn't  
25 change. Scientific affairs then became worldwide

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1 scientific affairs. I got broader responsibilities,  
2 some additional people. So the title didn't change. It  
3 went from Scientific Affairs -- SA -- to WSA and that  
4 was a year or so. It's on my resume. It's hard to keep  
5 perfect track of this.

6 And then I went to become group director of  
7 worldwide scientific affairs and then vice president of  
8 worldwide scientific affairs, and then my last year,  
9 vice president of research and development engineering.  
10 But the dates as precise as I can get are in my resume.

11 Q Did you ever tell your superiors that smoking  
12 caused lung cancer?

13 A Oh, sure.

14 Q Who did you tell? You've already mentioned one  
15 name so far.

16 A Yeah, right. Dr. Jack Nelson and I spoke about  
17 that from time to time. Jack was at that time the head  
18 of operations. R and D was one of the elements. I  
19 reported to him and R and D reported to him. He's now  
20 the president of Philip Morris USA.

21 Q Whose idea was it to start the tests that are  
22 being conducted in Europe now with real human beings?

23 A They're being done in the United States.

24 Q Really?

25 A Yes.

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1 Q Are there some tests being done in Europe?

2 A There is tests in humans being planned for  
3 Europe and Asia.

4 Q That hasn't been done yet?

5 A As far as I know, it hasn't started yet.

6 Q Where are the tests being done in the United  
7 States?

8 A Primarily at the clinical research

9 organizations, either at Covance or something called  
10 MSD, which is the old Harris Labs outside of Lincoln,  
11 Nebraska. There are multiple test sites because we're  
12 talking about hundreds and eventually thousands of  
13 people.

14 Q You said Covance. What's that?

15 A It's a multi-national research facility, does a  
16 lot of clinical and analytical work for the  
17 pharmaceutical industry for example.

18 Q What's being tested?

19 A Basically it's pretty much what we've presented  
20 in the IOM report and we've -- actually, on my resume  
21 and in my reliance documents we've presented the outline  
22 for the study. That's just a preface.

23 What we're testing is in a variety of  
24 commercial, Philip Morris commercial products and in  
25 some prototype cigarettes that we believe have the

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1 potential for being harm reduced, we're measuring  
2 exposure of smoke constituents in smokers under highly  
3 controlled conditions right now and then soon under  
4 free-ranging real world conditions.

5 And so these people are given a general  
6 medical. There are consent forms. There's an  
7 investigational study, IRB review. And we're looking at  
8 five or six biomarkers of exposure in these people and  
9 some biomarkers of effect. It's a rather large menu of  
10 things.

11 In addition, for the free-ranging studies,  
12 there's going to be questionnaire information, periodic  
13 follow-up and banking of biological samples for us or  
14 somebody else to use at some point in the future.

15 Q Are you getting consent forms from these  
16 people?

17 A Yes.

18 Q What are they consenting to?

19 A I have not personally seen the consent forms,  
20 but depending on the nature of the study, they are  
21 consenting to smoke these products over a certain period  
22 of time and to give biological fluids and measurements  
23 over that period of time. And I think they are given  
24 some financial remuneration. I don't know what that is.

25 Q Whose idea was it to run these tests?

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1 A The human exposure studies, it was a direct  
2 emanation from the work of the Institute of Medicine.

3 Q What's the Institute of Medicine?

4 A The Institute of Medicine is an institute  
5 within the National Academy of Sciences, which were  
6 established by President Lincoln to provide the federal  
7 government with technical advice that might not be  
8 available otherwise in the government.

9 Q When will the results be known?

10 A The results of our studies? As they're coming  
11 out, we're presenting them to the -- I said this  
12 earlier, I'm sorry -- to the scientific community.

13 Q Then you shouldn't be sorry. I'm sorry. If  
14 you said it earlier, don't say it again. I'll withdraw  
15 the question.

16 When did it start?

17 A Well, the actual exposure studies started last  
18 year. The plans for the studies have been going on for  
19 several years.

20 Q Were you involved in the planning?  
21 A Yes, sir.  
22 Q Whose idea? You've already told me whose idea  
23 the studies were?  
24 A No. I said it're really coming from the  
25 Institute of Medicine, but that's not a totally fair

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1 response. Forgive me.

2 Our submissions to the Institute of Medicine  
3 were consistent with their recommendations for doing  
4 this study. And I think a lot of this came from  
5 Dr. Solana and his discussions with his scientists over  
6 what we need to do with discussions that were held with  
7 Health Canada, with Dr. Benowitz, and as I said earlier,  
8 also with Dr. Burns. They all contributed.

9 But if you're asking me did somebody wake up  
10 and say, We need to do these human exposure studies, can  
11 I think of the person who woke up in the middle of night  
12 and said that, no. I think it was arrived at by  
13 Dr. Solana and his colleagues over a period of time of  
14 deliberating over what we need to do, what Philip Morris  
15 needs to do to address certain questions.

16 And we were -- he and, I think, his scientists,  
17 myself included, were not happy with our ability to take  
18 what anybody, including ourselves, have done and move  
19 forward. We needed to sort of shift the paradigm. And  
20 the Institute of Medicine really ignited that entire  
21 thing.

22 Q How many times over the course of I guess  
23 eleven years, ten years that you were at Philip Morris  
24 did you tell someone of equal rank to you or higher rank  
25 on the corporate flow chart that you believed smoking

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1 caused lung cancer?

2 A I never kept count of that. Is it something  
3 that I said on a regular basis to anybody? I don't  
4 believe so.

5 Q Did you write memos about it?

6 A I wrote actually a causation memo on what it  
7 would take to scientifically prove smoking caused lung  
8 cancer. And I wrote a memo on that. I wrote it before  
9 I retired. But what exact year, I don't know.

10 Q What about a memo that said I think smoking  
11 causes lung cancer?

12 A No.

13 Q Why didn't you do that?

14 A It never crossed my mind as being important for  
15 me to put that in writing. I mean my responsibility, my  
16 personal responsibility and my professional  
17 responsibility was very clear. I had no reason as far  
18 as I can tell, then or now, to go through the halls of  
19 R and D and tell people as many times as possible, This  
20 is what's going on.

21 We had serious work to do. And having  
22 conversations like that were few, and they were related  
23 to very specific, very specific issues.

24 Q What does that mean, they were related to  
25 specific issues? If you say smoking causes lung

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1 cancer --

2 A It is related to what the company is going to  
3 do and say about it.

4 Q Did you ever discuss what the company was going

5 to do or say about it?  
6 A Oh, yes.  
7 Q What?  
8 A Much larger --  
9 Q With whom?  
10 A A much larger body of people, including, I  
11 don't know if it was directly with Mr. Bible but it was  
12 people at his level. And this had to do with the  
13 so-called Hatch Statement, which was really the  
14 beginning of what I would call the major change in the  
15 Philip Morris philosophy approach to this.  
16 Q Who is Hatch?  
17 A Senator Orrin Hatch from Utah. I think he was  
18 maybe at the time the chair of the judiciary committee.  
19 And somebody in his committee, maybe Senator Kennedy or  
20 somebody, had asked a question of Philip Morris. And  
21 the Hatch Statement was a response to that.  
22 And it pretty much dealt with how Philip Morris  
23 would behave on certain public health issues.  
24 Q So when you said "the Hatch Statement," that's  
25 not a statement from Hatch? That's a statement to

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1 Hatch?  
2 A That's correct.  
3 Q Was this in the context of the attorneys  
4 general litigation and master settlement negotiations?  
5 A I don't know. I'm trying to think of the year  
6 in which the Hatch Statement was issued. It may have  
7 been during or after. I don't remember.  
8 Q So is the Hatch Statement in your reliance  
9 documents?  
10 A No.  
11 Q Why not?  
12 A It's not a scientific document.  
13 Q Have you seen it?  
14 A Oh, yes.  
15 Q What does it say?  
16 A I actually was asked to comment on it several  
17 times. It pretty much, paraphrasing, says we will  
18 withdraw from any public debate on active smoking and  
19 disease. I mean that was the major piece of that. And  
20 that was then followed by some other behaviors the  
21 company then took, but that was really the first salvo.  
22 Q What happened then?  
23 A With respect to connecting the question with  
24 regard to the Hatch Statement, the Web site activities  
25 were going on. And I was, I and others within RD and E,

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1 were asked to comment on specific points and statements  
2 within the Web site.  
3 And the Web site continues to be a dynamic  
4 document that continues to undergo change. Most  
5 recently I think they just changed the ETS Web site  
6 again.  
7 Q To what?  
8 A Basically, I'm paraphrasing, basically saying  
9 that people should rely upon the statements of the  
10 public health authorities when it comes to environmental  
11 tobacco smoke. It says other things, but that to me was  
12 a very important statement.  
13 Q I have it on some authority that in the public  
14 report having to do with smoking in Czechoslovakia -- do  
15 you know what I'm talking about?



16 A I think so.  
17 Q That Philip Morris said that secondhand smoke  
18 was responsible for 10 percent of all smoking-related  
19 diseases. Have you read that?  
20 MR. MAUNEY: I object to the question to the  
21 extent it's said to be a statement of Philip Morris.  
22 THE WITNESS: I was not involved in the report,  
23 nor do I know any Philip Morris scientists that were  
24 involved in the creation of that report, nor have I read  
25 the report.

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1 Q BY MR. PIUZE: You're aware that there was  
2 something like that in the report though; is that true?  
3 A I have heard that but I've not read that.  
4 Q Where have you heard it?  
5 A I think from either one of your legal  
6 colleagues or one of my legal colleagues.  
7 Q What do you have to say? I've got no reason  
8 right now to discuss whether that's true or not, but  
9 just assume that in that report, the Czechoslovakian  
10 Republic is told that secondhand smoke is responsible  
11 for 10 percent of all smoking-related disease. Would  
12 you disagree with that statement?  
13 A I have no -- since I haven't read the report, I  
14 don't know what the basis for that conclusion is. Is it  
15 in reference? What those references are. So I can't  
16 comment. I haven't read it. And I don't know what the  
17 assumptions and underlying data are that they used to  
18 arrive at that.  
19 Q Then I just want to know, do you agree that  
20 secondhand smoke is responsible for 10 percent of all  
21 smoking-related diseases?  
22 A No, I don't.  
23 Q Why don't you?  
24 A Well, that would mean of the approximately  
25 430,000 deaths in the United States that are attributed

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1 to smoking, that 43,000 would be related to  
2 environmental tobacco smoke. If one wants to follow  
3 through on the logic, that number, if one uses some of  
4 the reports, that number is either way too high or way  
5 too low.  
6 Q Which number?  
7 A The 10 percent. It's either way too high or  
8 way too low.  
9 Q Why too high?  
10 A It depends on whose numbers, which agency's  
11 report you want to use. If you use say the EPA, they  
12 estimate it could be as many as 50,000 deaths just from  
13 cardiovascular disease associated with ETS. Forget  
14 about the other smoking-related diseases. So 10 percent  
15 of 430,000 is 43,000. So just based on cardiovascular  
16 disease, that's a wrong number.  
17 Q That's too low?  
18 A It's too low just based on that. Now, if you  
19 look at the lower estimate of the numbers, then that  
20 43,000 is way too high. I mean to think that ten --  
21 Q Let's stop there for a second.  
22 MR. MAUNEY: I would like, if you need to  
23 finish the answer, for the witness to be permitted to  
24 finish it.  
25 MR. PIUZE: Okay.

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1 THE WITNESS: If you look at the lower  
2 estimates for these risks, they go to zero. It's not,  
3 you know, like somebody says, yeah, there are 50,000  
4 deaths. They say there's a range of possibilities from  
5 zero to some number.

6 To think that 10 percent of the smoking-related  
7 deaths in the United States are related to ETS just  
8 doesn't make any sense at all to me. Even if you  
9 believe the point estimates that the EPA published on  
10 lung cancer, there's no way you can get there.

11 But without seeing the Czech report and what  
12 they used to arrive at that number, there's no way for  
13 me to cogently respond to your question.

14 Q BY MR. PIUZE: You are sort of assuming in your  
15 answer that this 10 percent would be spread out over all  
16 categories of illness and all degrees of illness and  
17 that isn't necessarily true.

18 A I take the two major ones.

19 Q Don't you think that if someone says secondhand  
20 smoke is responsible for 10 percent of all  
21 smoking-related diseases, maybe all of that 10 percent  
22 is nonfatal as an example?

23 MR. MAUNEY: Objection; calls for speculation  
24 about what other people think.

25 THE WITNESS: No, that's not what you said.

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1 You said responsible for 10 percent of the  
2 smoking-related deaths.

3 Q BY MR. PIUZE: I apologize if I misspoke.

4 A I was responding to the death part.

5 Q Let's do it the other way. Do you agree that  
6 secondhand smoke is responsible for 10 percent of all  
7 smoking-related disease?

8 A I don't know how to answer that question. I  
9 mean we've agreed or I've agreed earlier about certain  
10 asthmatics and irritation and SIDS, and there are  
11 millions of medical visits a year. I mean I have no  
12 idea what the role target is here.

13 So it's not the 430,000 deaths. It's some much  
14 larger number that I can't define. And if I can't  
15 define that number, how can I define some fraction of  
16 that number?

17 Q So you don't agree or disagree on this?

18 A I don't know.

19 Q Where do you get the 430,000 from?

20 A From the Surgeon General's reports, from the  
21 Centers for Disease Control, from numerous publications  
22 that cite back to that number. I think that was last  
23 year's number.

24 Q 430,000 people died last year in the United  
25 States from smoking-related diseases?

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1 A That's what the report said.

2 Q What about in the year before?

3 A It was some smaller number.

4 Q How about a decade before?

5 A It was a much smaller number.

6 Q Have you ever figured it out?

7 A Actually it's not a question of figuring it  
8 out. It's there. If you look at the early Surgeon  
9 General's reports, it's 90,000. It just goes up. It's  
10 been going up every year, at least till last year.

11 Q The early Surgeon General's report, what year

12 would that be?  
13 A The first Surgeon General's report on tobacco  
14 smoking was '64.  
15 Q What about into the '50s? Were there any  
16 statistics as to how many people died from  
17 tobacco-related diseases in the '50s?  
18 A Maybe in the late '50s there was some numbers.  
19 I don't believe in the early '50s.  
20 Q Who generated the numbers?  
21 A In the late '50s the -- well, you had some  
22 epidemiological reports that appeared in the very early  
23 '50s, but it really wasn't until the very late '50s that  
24 the public health community really started to look at  
25 this. And that was the beginning of, '59 was the

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1 beginning of what currently is called Cancer Prevention  
2 Study No. 1. It was started in 1959.  
3 So it's within that time frame, but it took  
4 from the beginning of the first Western -- the American  
5 reports and the British reports, it took some time after  
6 that before they really started trying to figure out  
7 what was going on numerically.  
8 Q What's the death toll from cigarettes in the  
9 last fifty years in the United States?  
10 MR. MAUNEY: If you know.  
11 THE WITNESS: I don't know.  
12 Q BY MR. PIUZE: Who does?  
13 A Who does know?  
14 Q Yes. Hasn't anyone ever sat down and added  
15 them all up?  
16 A I think there are estimates one can make to  
17 that, but I have only seen projected estimates on a  
18 worldwide basis going, projected going forward. I  
19 haven't seen, I can't remember any going back.  
20 Q What have you seen going forward?  
21 A It's a linear extrapolation, talking about four  
22 million deaths a year worldwide, and how that could grow  
23 if the use of tobacco continues the way it's continuing.  
24 Q How long has four million been the number?  
25 A It was a number I read this year.

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1 Q What's it extrapolated out to?  
2 A Well, I think the total number of deaths on a  
3 worldwide basis is approximately fifty million.  
4 Q Over what period of time?  
5 A Last year. In one year fifty million people  
6 die every year in the world. 2.2 million die every year  
7 in the United States. And from that the WHO has  
8 estimated the number of smoking-related deaths  
9 associated with this, and then looking at the developing  
10 countries, has made projections as to what the  
11 smoking-related disease toll could be if things  
12 continue.  
13 Q Who made that projection again, please?  
14 A World Health Organization.  
15 Q What is their projection?  
16 A All I know is, what I remember is what they  
17 said they believe it currently is. And it will just  
18 continue to grow to a larger number. But what that  
19 number is I don't remember. It's a bigger number than  
20 the four million.  
21 (Discussion off the record.)  
22 Q BY MR. PIUZE: You've talked to Bible; right?

23 Face to face?

24 A Yes.

25 Q What have you talked to Bible about?

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1 A I saw him the morning of the stockholders'  
2 meeting.

3 Q This year?

4 A Yeah. I was preparing for the Department of  
5 Justice depositions, and I wished him well on his  
6 retirement. He introduced me to his wife. And he went  
7 his way and I went my way.

8 Q Have you ever had any substantive discussions  
9 with Bible?

10 A Several.

11 Q When? Where? What?

12 A I had a meeting in New York right before  
13 Christmas of last year where I made a technical  
14 presentation for about four hours to Mr. Bible and his  
15 staff on smoking and health. And the December before I  
16 had a meeting with him alone in his office talking about  
17 smoking and health issues and some things related to  
18 nicotine.

19 Q So that would have been December of 2000?

20 A No, 2001. No, no, you're right. You're right.  
21 You're right. Yes, yes, you're right.

22 Q How long was that meeting?

23 A An hour and a half.

24 Q Just the two of you?

25 A Yeah, just he and I.

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1 Q What did you tell him?

2 A What did we speak about?

3 Q What did you tell him?

4 A The question was about nicotine and its role in  
5 smoking and whether, if you just had a system that  
6 delivered nicotine, whether that would be fine.

7 And I said to him that, comparatively speaking,  
8 the answer would be yes. If you just had something that  
9 delivered nicotine versus what you have in the  
10 cigarette, comparatively speaking, that would be -- and  
11 people would use it, that would be a tremendous  
12 improvement. But I told him that having said that, that  
13 nicotine itself could pose issues for the user,  
14 especially people that have compromised cardiovascular  
15 systems.

16 And then I think I related to him a  
17 conversation I had with Dr. Benowitz prior to that where  
18 Dr. Benowitz and I, I believe, pretty much agreed that  
19 if you could get rid of the 4,000 other things in smoke  
20 and just deliver nicotine, that would be infinitely  
21 better and that, comparatively speaking, it might be,  
22 from a public health perspective at least, in some  
23 interim way dealing with just nicotine.

24 But I told Mr. Bible that eventually, if you  
25 were ever able to do that, to deliver nicotine in a way

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1 that people would use it, that that in itself then could  
2 pose a problem, at least in some other people's minds.  
3 But relative to a cigarette, if you could do that, that  
4 would be a very important step forward in my mind.

5 And I pushed for him to do that because we, as  
6 you may know, have been developing such a system.

7 Q Let's go backwards. From that meeting with him

8 alone, when's the last time before that that you talked  
9 to Bible?

10 A I think I had lunch at 120 Park Avenue. I was  
11 having lunch with Mr. Zemansieck and Mr. Bible came in,  
12 just sat down and some other people came in. And it was  
13 just a lunch conversation, just personal chitchat kinds  
14 of stuff.

15 Prior to that, I mean other than saying hello  
16 to him, seeing him in the hall, we had a recall. Philip  
17 Morris had a recall of an enormous number, amount of  
18 product. And I went up to New York to help in terms of  
19 the recall efforts, and he was up there. Everybody was  
20 sort of working 24 hours a day, seven days a week,  
21 trying to figure out what was going on and how we were  
22 going to do this.

23 Q What year? '94?

24 A No. I think it was much later than that. I  
25 think '94, I think it was later than that.

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1 Q What was being recalled?

2 A Marlboro.

3 Q Why?

4 A It was the largest consumer product recall in  
5 the history of the United States. Somebody in the  
6 manufacturing facility detected an off odor in one of  
7 the humectants that was being used. And by the time  
8 they got that shut down, millions of cigarettes had been  
9 made and packaged and sent out.

10 And there was a decision made that night not to  
11 wait but to go public and get this product back. And  
12 then Mr. Bible contributed to a decision that we go to  
13 the Centers for Disease Control and Prevention and  
14 pretty much give them everything we had in terms of  
15 information and asked them for their advice.

16 So I interacted with him directly around that  
17 point, both in New York and maybe in Richmond.

18 Q Was that before or after the Minnesota trial?

19 A I have no idea. I think it was before.

20 Q Did you ever discuss with Bible whether or not  
21 people die from smoking cigarettes?

22 A Not in those terms. At the last meeting before  
23 Christmas when I was up in New York, the Philip Morris  
24 Web site was discussed. And there was, my take-away was  
25 there was clear agreement as to his position and the

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1 company's position on the Web site. And that covered  
2 the whole thing from active smoking down to ETS.

3 Q When is the first time that the Web site, which  
4 year was it that Philip Morris put something up on the  
5 Web site that said something like public health  
6 officials agree that smoking causes lung cancer? It's  
7 addictive?

8 A That was the first version of the Web site.  
9 What year that was, I know I was starting to look at  
10 stuff in '99. But, so it clearly was subsequent to  
11 that. Whether it was later in '99 or 2000, I don't  
12 know.

13 Q Did someone come to you and ask you before they  
14 did it?

15 A Oh, yes.

16 Q Who did that?

17 A Two people. And I testified to this.

18 Q You are assuming I know where you testified and

19 I don't know. You tell me where it is rather than me  
20 asking the question.  
21 A Dr. Roger Walk, basically two people, who was a  
22 scientific affairs scientist on loan to New York  
23 providing scientific advice. And then Mr. Mark Berlin,  
24 who is a lawyer for Philip Morris working with Roger  
25 Walk was putting together a Web site and the links. And

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1 I was asked by both of them separately on a number of  
2 occasions to review what they had done for accuracy and  
3 completeness.

4 And I did. That's my initial involvement.

5 Q Do you think it's a good idea to have that  
6 information on the Web site?

7 A I do. I thought it was a logical step after  
8 what I called the Hatch Statement. I really do.

9 Q Tell me again if the Hatch Statement, you  
10 believe the Hatch Statement was the big ice breaker;  
11 right?

12 A From my perspective, yes.

13 Q Tell me what you believe the etiology of that  
14 statement was.

15 A The etiology?

16 Q Well, don't answer because it's a crummy  
17 question.

18 A I can't.

19 Q Tell me why you think that statement was  
20 written.

21 A If I can't tell you the etiology, to me,  
22 etiology is the same thing as telling you why.

23 Q Of course it is, but the second question is a  
24 much better question to read to the jury.

25 A I understand. I got you.

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1 Q That's why it's a crummy question.

2 A I got you.

3 Q Human first, lawyer second.

4 A I don't know what the origin is. I have seen  
5 older internal documents as a result of litigation in  
6 which people were discussing changes, public changes in  
7 the company's position.

8 Q Who? When? Where?

9 A There's an Alex Holtzman. He was retired. He  
10 was --

11 MR. MAUNEY: Is there any chance that it's a  
12 privileged document that you're starting to talk about,  
13 Richard? Because if there is, we need to stop and  
14 figure that out.

15 THE WITNESS: Let me ask you.

16 MR. MAUNEY: Can we have a break to confer with  
17 the witness, please.

18 MR. PIUZE: Sure.

19 (A discussion was held between the  
20 witness and his attorney outside the  
21 deposition proceedings.)

22 MR. MAUNEY: I'm going to instruct Dr. Carchman  
23 to stop right there and instruct him not to go any  
24 further into that particular document. But if there are  
25 other non-privileged documents, then he can talk about

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1 that or ask me if he has any question about it.

2 MR. PIUZE: I guess you guys have made an  
3 internal decision that it's privileged.

4 MR. MAUNEY: I think it is.  
5 MR. PIUZE: And the reason for that would be  
6 why?  
7 MR. MAUNEY: Alex Holtzman, attorney for Philip  
8 Morris, document being written.  
9 MR. PIUZE: Who did he work for?  
10 MR. MAUNEY: Alex Holtzman was an in-house guy.  
11 MR. PIUZE: Can I just rule right here on the  
12 spot as a crime fraud exception?  
13 MR. MAUNEY: You can rule but you can't expect  
14 me to abide by that ruling.  
15 Q BY MR. PIUZE: So he instructed you not to  
16 answer. The question you were answering I believe had  
17 to do with the origin of the statement. So that  
18 document is off limits. Can you answer the question  
19 without alluding to that document?  
20 A I can't tell you what the etiology or origin of  
21 the Hatch Statement is.  
22 MR. PIUZE: I've got no further questions. I  
23 thank the witness for his cooperation.  
24 Stipulate that the court reporter can be  
25 relieved of all of her obligations under the Code of

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1 Civil Procedure if she'll send the original of this  
2 deposition to the witness.  
3 MR. MAUNEY: We would like for Richard to read  
4 it and sign it, whether it comes to me and I pass it to  
5 you or it goes directly to him  
6 THE WITNESS: Why don't they send it to you and  
7 you send it to me.  
8 MR. PIUZE: Send it to Arnold and Porter in  
9 Washington, D.C. Dr. Carchman can sign it under penalty  
10 of perjury at the time and place of his choosing as long  
11 as I'm informed of any corrections, additions,  
12 modifications, et cetera, within 30 days of counsel's  
13 receipt. If I'm not so informed, that I can use my copy  
14 as if it's a signed, sealed, delivered original. And  
15 you guys get to keep custody of the deposition.  
16 MR. MAUNEY: Is that 30 days after my receipt  
17 of the signed copy from him?  
18 MR. PIUZE: Yes.  
19 MR. MAUNEY: Thirty days from when I receive it  
20 in my office?  
21 MR. PIUZE: Yes.  
22 MR. MAUNEY: Fine.

23 (The deposition concluded at 1:45 p.m.)

24 \*\*\*  
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1  
2 DEPONENT'S DECLARATION  
3  
4 I, RICHARD CARCHMAN, Ph.D., hereby declare:  
5 I have read the foregoing deposition transcript  
6 and identify it as my own and approve same.  
7 I declare under penalty of perjury under the  
8 laws of the State of California that the foregoing is  
9 true and correct.  
10  
11  
12 \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
13 Date City State  
14

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RICHARD CARCHMAN, Ph.D.

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1 STATE OF CALIFORNIA       )  
  ) ss.  
2 COUNTY OF LOS ANGELES    )

3  
4           I, RANDY D. GARRETT, Certified Shorthand  
5 Reporter, Certificate No. 8931, for the State of  
6 California, hereby certify:

7           I am the deposition officer who  
8 stenographically recorded the testimony in the foregoing  
9 deposition;

10           Prior to being examined, the deponent was by me  
11 first duly sworn;

12           The foregoing transcript is a true record of  
13 the testimony given.

14           I was relieved of my duty pursuant to the Code  
15 of Civil Procedure, Section 2025(q)(1), and therefore  
16 any changes made by the deponent or whether or not the  
17 deponent signed the transcript are not set forth.

18  
19           Dated May 17, 2002, Los Angeles, California  
20  
21

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Randy D. Garrett, CSR No. 8931

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